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Volume 55

Number 3

# The Journal

of the Michigan State Medical Society

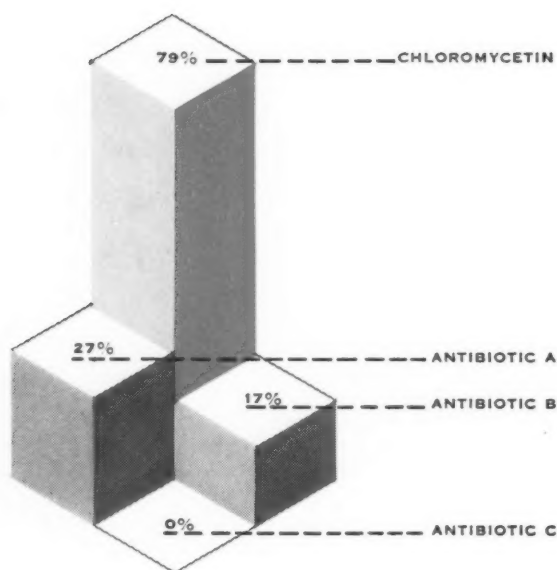
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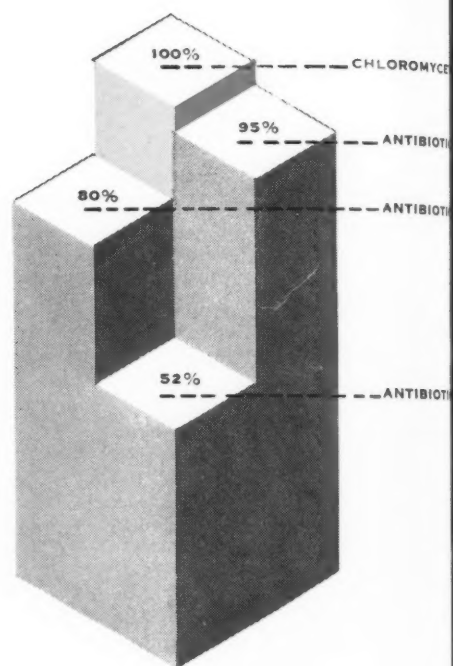
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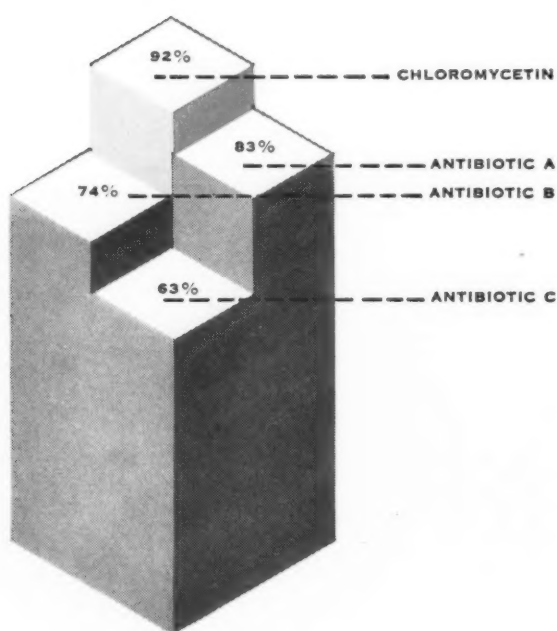
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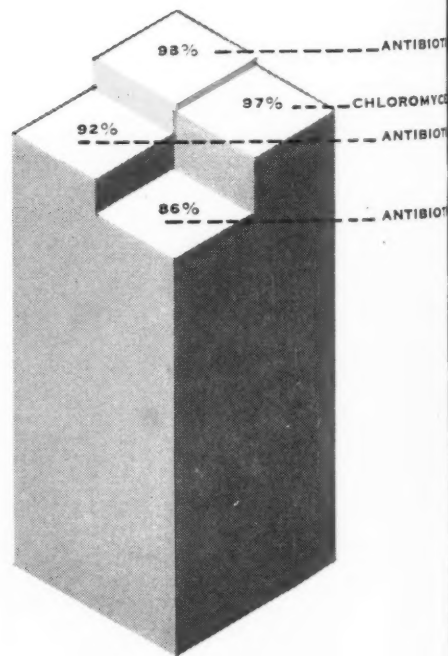
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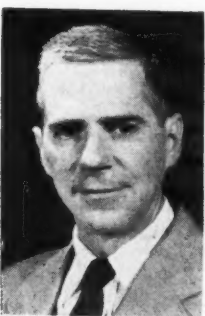
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# THE JOURNAL

## of the Michigan State Medical Society

VOLUME 55

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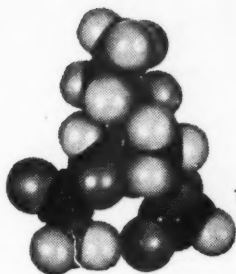
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MARCH, 1956

Say you saw it in the *Journal of the Michigan State Medical Society*

# You and Your Business

## INDUSTRIAL HEALTH

The sixteenth annual Congress on Industrial Health was held at the Sheraton-Cadillac Hotel, Detroit, January 23, 24, 1956. It was sponsored by the Council on Industrial Health of the American Medical Association, the Wayne County Medical Society, the Michigan State Medical Society, the Detroit Society for Surgery of Trauma, the Michigan Industrial Medical Association and the Detroit Industrial Physicians' Club.

On Sunday, January 22, 1956, the Conference of State Medical Society Committees on Industrial Health convened. The chairman, E. S. Jones, M.D., of the Council on Industrial Health of the AMA, presided. Orlen Johnson, M.D., Detroit, chairman of Michigan's Industrial Health Committee, gave the welcome. Committees were appointed and introductions and announcements were made. Clark D. Bridges, M.D., acting secretary, presented the summary of the year's work in mimeographed form. Each state chairman could make remarks or additions.

The program theme was "What We Expect from Our Committee on Industrial Health." F. Lee Stone, M.D., Chicago, president-elect of the Illinois State Medical Society, spoke from the standpoint of a State Medical Society President, giving a well-prepared listing of activities and opportunities. Earl A. Thayer, M.D., Milwaukee, spoke on the viewpoint of a State Medical Society Secretary. He stressed the importance of records, reports, and also many activities available to such a committee. Wilfrid Haughey, M.D., Battle Creek, spoke from the viewpoint of a State Medical Society Editor. He mentioned Michigan's various activities and devotion of certain numbers of THE JOURNAL to special topics, citing the August, 1955, number on industrial health. He mentioned activities of the University of Michigan Medical School in response to the gift by General Motors of \$1,500,000 for industrial health research. A system of surveys is in process. Also Wayne University has a department established for about two years devoted to industrial health. The Editor took occasion to mention a few valuable rules in preparing a paper for presentation, and especially for publication.

Preston N. Barton, M.D., chairman of the Connecticut State Medical Society Committee on Industrial Health, spoke from the other side of the fence: "What the Committee on Industrial Health Should Expect from the State Society."

On Monday, January 23, Milton A. Darling, M.D., and Arch Walls, M.D., gave the welcome from Wayne County and the Michigan State Medical Society. The subject "Occupational Medicine in Industrial Relations" formed a very interesting

and instructive symposium: "The Physician," Norbert J. Roberts; "The Nurse," Katherine A. Lembright; "The Employer," Charles B. Gorey; "The Labor Referee," David A. Wolff; "The Employer," Harry Read.

According to A. Hazen Price, M.D., a University of Michigan professor who is consultant to several large corporations, one fact which should be stressed is that older workers are not the major contributors to absence they have been believed to be. However, Dr. Price said older workers need to be eased into retirement and helped in their adjustments, as a major preventive against chronic disability. Yearly evaluation of individuals is needed, to stave off the physical and mental deterioration which results when the older worker faces a fixed retirement date.

Mental and emotional problems were flatly named as greater causes of absence than any occupational disease or accident, by Dr. Frank A. Calderone, public health administration, Long Island.

Dr. Calderone said true reduction in total absenteeism will occur when management, labor and industrial medicine allow the industrial medical service to do its proper job of prevention and counselling, thus enabling it to help the worker achieve and maintain the highest level of emotional and physical well being.

He said the key to the morale problems of industry, and to absence reduction, is the return of the relationship of "family doctor" to patient, involving "those rare qualities of understanding, of sympathy, of deep human concern, of affection."

The annual award given by the President's Committee on Employment of the Physically Handicapped was presented to Dr. Gradie R. Rowntree, medical director of the Fawcett-Dearing Printing Company, Louisville, Ky. Signed by President Eisenhower, the award was given to Dr. Rowntree by Maj. Gen. Melvin J. Maas, USMCR, retired, chairman of the President's committee.

One of the high points of the meeting was the award talk given by General Maas, who has been totally blind for four years and suffers from arthritis and diabetes. During the past year, he has travelled some 100,000 miles in the committee's work to get jobs for the handicapped and "restore to them their dignity."

One of the most striking features of the meeting was the discussion of auto accidents and safety, particularly the talks by A.M.A. president Elmer Hess, M.D., Erie, Pa., and Ford Motor Company vice president Benson Ford, Detroit, at the banquet Monday evening, Jan. 23, 1956.

Participating in a panel on "Medicine's Re-

(Continued on Page 236)



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## INDUSTRIAL HEALTH

(Continued from Page 234)

sponsibilities in the Automotive Age," Dr. Hess suggested several steps toward reducing the "sordid" highway accident toll, including tougher driver license requirements with interstate standardization, stricter law enforcement, standardized safety improvements in automobiles, and a national research institute on safe driving.

While complimenting the automobile industry on its recent efforts to add safety features, Dr. Hess criticized its emphasis on power and "sizzling take-off." He said the industry should "make itself responsible for producing machines which do not tempt men to make fools of themselves."

Benson Ford disagreed with Dr. Hess on several points. He said he felt the development of safety equipment would advance more rapidly if kept highly competitive, so that industries would vie with each other to produce the safest cars.

He said that "unfortunately, there is a shortage of the cold scientific evaluation and fact-finding that we need in order to progress as fast as we should like in reducing the injury potential of the automobile interior."

Noting that the medical profession has recently entered more actively into co-operation on accident prevention fact-finding, such as the Cornell University research, Ford urged that doctors devote even more attention to these efforts.

He said the medical profession in the past has been "a sort of hair shirt" to the automotive industry on safety design, and the industry has sometimes "smarted under unjust criticism." He said the industry has accepted this because it is "just as interested in automotive safety as doctors are."

The meeting drew nearly 500 leading physicians, ranking medical officers of the armed forces, medical directors of major industries, nurses, and heads of departments or deans of universities engaged in industrial health study.

## ANOTHER MEDICAL SCHOOL

The House of Delegates of the Michigan State Medical Society at the September, 1954 meeting instructed the Council to arrange for the 1955 meeting a panel of the Deans of our two medical schools. The proceedings of that panel were published on page 73 of *THE JOURNAL* for January. During the course of this discussion on September 26, 1955, in Grand Rapids, Dean Furstenberg and Dean Scott expressed the need of a third medical school in Michigan in the near future, because Michigan is not graduating enough medical students to supply more than half of our yearly requirements. This idea was developed editorially in *THE JOURNAL* for November, 1955 (page 1346).

The suggestion has borne fruit. The newspapers in Grand Rapids, for January 31, and others throughout the state carried a notice of a petition to be presented to the Board of Regents of the University of Michigan to establish a branch medical school in Grand Rapids. The Grand Rapids request for a branch medical school came when a citizen's committee petitioned the Board of Regents at Ann Arbor and suggested Calvin Cottage as a possible site for the school. The petition was timed to be given consideration at the next meeting of the Board of Regents scheduled for February 10.

At about the same time, the editor and some of the members of the Council of the MSMS received a ten-page letter from the Grand Rapids Citizens' Committee giving the arguments and facts to support their request.

In the past weeks, we have also heard of two other sets of plans for medical schools, but have seen nothing in print. One of the projects seems to have a promise of several million dollars to be used for the establishment of the school. Dean Furstenberg's idea seems to be bearing fruit.

## DEDUCTIBLE PLAN FOR BLUE CROSS URGED IN HOUSE

Use of the "deductible insurance plan" on Blue Cross group hospital insurance was proposed by Rep. Allison Green (Kingston), Republican floor leader in the House, on January 31, 1956.

A reaction to the 15 per cent increase in Blue Cross rates March 1, the bill proposes that the subscriber pay the cost of the first day of hospitalization and 15 per cent of the cost for each day after the seventh.

"Blue Cross figures show that the average hospitalization is seven and one-half days," Green said.

"The deductible feature has served a definite purpose in the automobile insurance field and I can see no reason why it cannot be applied to hospital insurance as well."

Blue Cross has 3,600,000 subscribers in Michigan. Its rate structure is to be investigated by a study commission which will be appointed soon by Governor Williams.—*The Detroit News*, Jan. 31, 1956.

## UNION PROPOSES COMPETITIVE HOSPITAL PLAN

A proposed hospital and medical group payment plan was announced today, apparently in a labor union attempt to set up competition to the Blue Cross-Blue Shield organization.

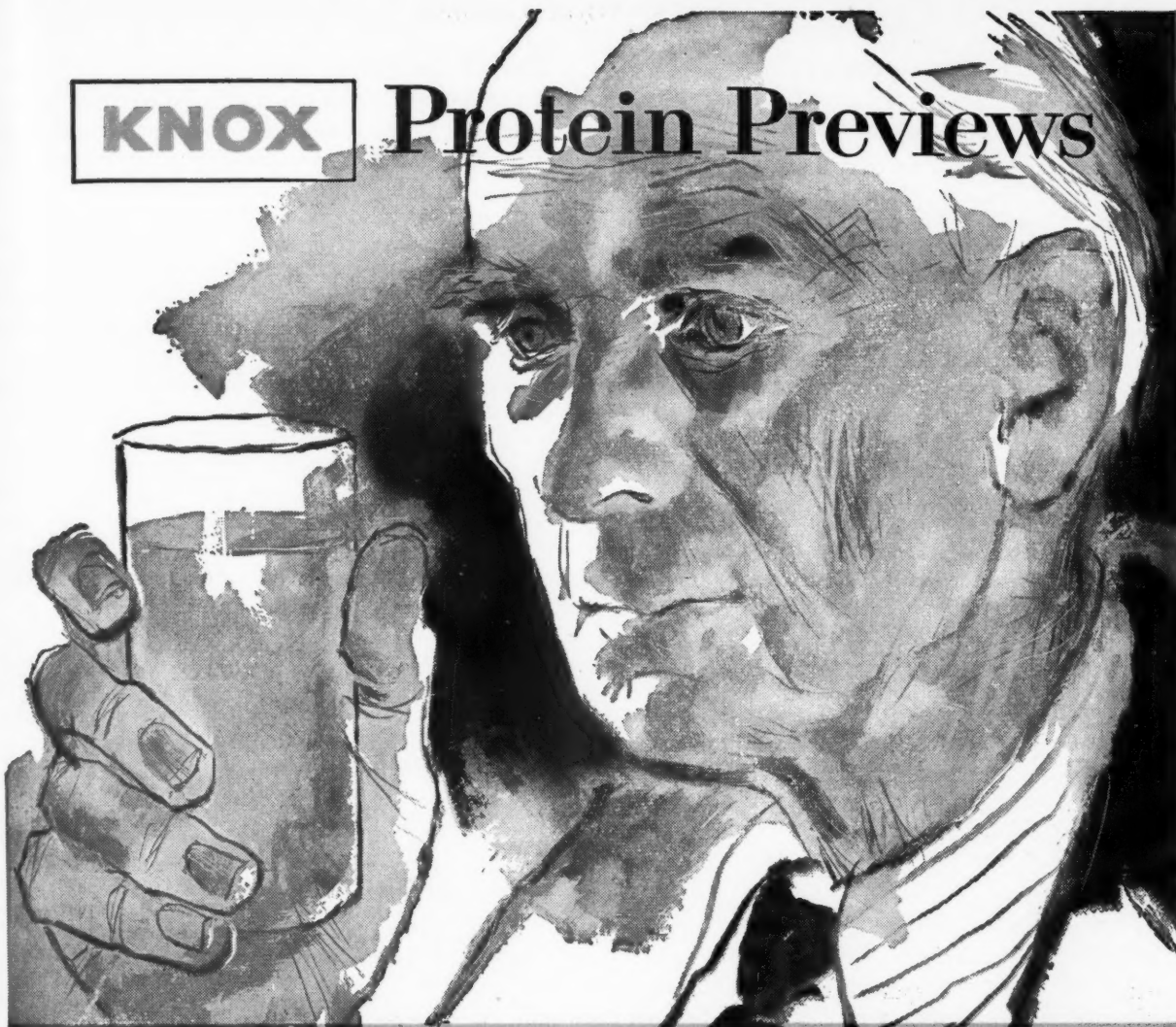
The plan was disclosed in a letter from Detroit Attorney Harry H. Young to State Insurance Commissioner Joseph Navarre, asking for forms for articles of association.

The letter requested a meeting with Navarre to

(Continued on Page 238)

**KNOX**

# Protein Previews



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MARCH, 1956

*Say you saw it in the Journal of the Michigan State Medical Society*

## UNION PROPOSES COMPETITIVE HOSPITAL PLAN

(Continued from Page 236)

arrange details of the plan and discuss rates to be charged.

The letter said, "The principal purpose is to cover the membership of a number of local unions in this area that are affiliated with the AFL-CIO." The unions were not identified.

Officials of the United Auto Workers Union, which has been critical of a recent boost in Blue Cross rates, said the international union was not involved in the new program but would be "watching with interest."

The letter to Navarre proposed two separate organizations for prepaid hospital care and medical-surgical service.

It said the plan, to be called "the Michigan Federated Unions Medical Plan," would include diagnostic and outpatient care, neither of which is included in Blue Cross-Blue Shield policies.

The letter said capital of \$10,000 has already been subscribed for the new group. It said the plan would:

"Provide its members with a fully pre-paid medical, surgical, obstetrical, ambulatory diagnostic and ambulatory treatment care, in-and-out patient care, either in doctors' offices, hospitals or clinics."—*Kalamazoo Gazette*, Sunday, February 5, 1956.

## HOSPITALS BATTLE MEDICINE TAXATION

Trustees of the Michigan Hospital Association have threatened legal action to restrain the State Revenue Department from collecting sales taxes on medicine administered to patients.

The Revenue Department last November notified 250 private and nonprofit hospitals of intent to collect on drugs and food which heretofore have been a hospital service.

Hospitals were told they must be licensed by the Sales Tax Division before March 1.

Tax returns will be required after that date.

Revenue Director Louis M. Nims says the move is intended to curb tax-free sales of pharmaceuticals by nonprofit hospitals.

The hospitals do not interpret the order as so limited.

They insist that medication and meals are a part of the service they render in restoring patients to health.

Hospital insurance plans now do not cover taxes on food and drugs.

An immense amount of bookkeeping would be involved in separating the "service" accounts which the insurance covers and the taxes on the drugs and food which the patient would pay separately.

In Ohio, hospitals are fighting an attempt to collect a like tax on blood which generally is valued at about \$35 a pint.—*Detroit Free Press*, February 3, 1956.

## BREAK-DOWN

Of the 1673 doctors of medicine who attended the 1955 MSMS Annual Session in Grand Rapids, forty-five came from states other than Michigan, with Ohio leading the registration, closely followed by Ontario, Canada.

Of the balance of 1628, 257 were from Detroit and Wayne County. All specialties were represented, led by General Practice with 501. Surgery followed with 206, and Medicine with 122. Other totals by specialties were Pediatrics 55, Obstetric-Gynecology 53, Nervous and Mental 47, Ophthalmology 39, Public Health and Preventive Medicine 35, Radiology 31, Anesthesiology 28, Otolaryngology 20, Urology 20, Gastroenterology-Proctology 16, Pathology 14, and Dermatology-Syphilology 13. Physicians who did not list a specialty totalled 47.

A total of 125 interns and residents attended the 1955 (90th) MSMS Annual Session.

## RESOLUTIONS APPROVED BY MSMS HOUSE OF DELEGATES—1955

### RESOLUTION RE COMMITTEE ON DIVISION OF FEES (MMS)

WHEREAS, the Board of Directors of Michigan Medical Service has adopted the recommendations of the Special Committee of the Board of Directors of Michigan Medical Service, to divide the scheduled fee of Michigan Medical Service between physicians, and

WHEREAS, both the Committee and Board of Directors of Michigan Medical Service have recommended that Michigan State Medical Society develop the methods of implementation of this procedure; therefore be it

RESOLVED: That the recently appointed Study Committee on Fee Schedules for Michigan Medical Service be directed to review the entire surgical fee schedules with a view to correction of the above mentioned and any other inequities found in its study.

### RESOLUTION RE STUDY OF SURGICAL FEES (MMS)

WHEREAS, the Michigan Medical Service is the creation of the Michigan State Medical Society and of the physicians of Michigan, and

WHEREAS, its continued growth and function requires, and indeed deserves, the full support and co-operation of all the physicians in the State, and

WHEREAS, it is now proposed the coverage be expanded to a still higher income group of the people of the State of Michigan, and

WHEREAS, the surgical fee schedule presently established by the Michigan Medical Service is not realistic in many respects, and

WHEREAS, this fee schedule is especially low for many operations usually done by the physicians in the so-called specialties groups, and

WHEREAS, the fee in these fields is often not commensurate with the skill, time and effort required, as compared with other surgery of a more general, or frequent, or more publicized nature, and

WHEREAS, this is particularly true in the operations not listed in the printed fee schedule; therefore be it

RESOLVED: That the recently appointed Study Committee on Fee Schedules for Michigan Medical Service be directed to review the entire surgical fee schedules with a view to correction of the abovementioned and any other inequities found in its study.

(Continued on Page 244)

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Rheumatoid arthritis,  
rheumatic fever,  
intractable asthma,  
allergies . . .

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# Cortef<sup>\*</sup> tablets

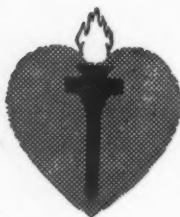
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## Heart Beats

### JONES CRITERIA (MODIFIED) FOR GUIDANCE IN THE DIAGNOSIS OF RHEUMATIC FEVER

In 1944, the late T. Duckett Jones, M.D., published criteria for the diagnosis of rheumatic fever which have been generally accepted in the United States and in many parts of the world. Subsequently Dr. Jones guided the revision of his criteria for use in the United Kingdom-United States Cooperative study on "The Relative Effectiveness of ACTH, Cortisone and Aspirin in the Treatment of Rheumatic Fever" and just prior to his death, he participated in a conference on the revision of his original suggestions for use by the practicing physician. These modified Jones criteria are based in great measure upon his suggestions.

Rheumatic fever is related to previous infection with group A beta hemolytic streptococci, but the mechanism of the disease is unknown. Its boundaries are indefinite, and its differentiation from other diseases is sometimes impossible. There is no specific laboratory diagnostic test. The diagnosis must therefore be arbitrary and empirical. Criteria herein set forth are aimed at identifying those individuals who have had or are having an attack of rheumatic fever. They make no attempt to measure rheumatic activity at any given time or to diagnose inactive rheumatic heart disease. Thus, following the designation of an illness as rheumatic fever, the existence of continued activity or the presence of inactive rheumatic heart disease may be indicated by criteria different from those outlined below.

Criteria are necessary in order to minimize both overdiagnosis and underdiagnosis. The tendency to label as rheumatic fever a chronic febrile illness

for which no obvious cause can be found is to be deplored. The tragedy which may lie in the wake of the false diagnosis of rheumatic fever may be even greater than the possible harm of missed recognition in questionable cases. The institution of effective prophylactic regimens requiring prolonged administration of sulfadiazine or antibiotic agents places a grave responsibility on the physician in the diagnosis of this illness.

In this statement, the diagnostic features of the disease are divided as originally proposed by Jones into major and minor categories dependent upon their relative occurrence in rheumatic fever and in other disease syndromes from which this disease must be differentiated. Thus chorea is included among the major criteria while fever, a symptom common to many diseases, is placed in a minor category. *These major and minor categories have no significance beyond their diagnostic import either as to prognosis, amount of "rheumatic activity," or severity of acute illness.* Indeed, a severe manifestation of rheumatic fever such as rheumatic pneumonia is not included because it is difficult to differentiate from congestive cardiac failure and because it almost always occurs in patients whose rheumatic fever is so obvious as to offer no difficulty in diagnosis.

*The presence of two major criteria or one major and two minor criteria indicates a high probability of the presence of rheumatic fever* (with one notable exception, see the last paragraph under "Other Manifestations"). In addition to the major and minor criteria to be used in the recommended formula, other manifestations have been listed which may be used to support the diagnosis. These criteria are not meant to substitute for the wisdom and judgment of the clinician. They are designed only to guide him toward a diagnosis of the disease with the suggestion that he follow carefully all questionable cases and restrict the diagnosis of rheumatic fever to illnesses which meet acceptable criteria.

(Continued on Page 342)

This is a report of the Committee on Standards and Criteria for Programs of Care of the Council of Rheumatic Fever of the American Heart Association and has been approved by the Executive Committee of that Council.

Copies of Jones Criteria (modified) for guidance in the diagnosis of rheumatic fever may be secured free of charge from the Michigan Heart Association, Doctors Bldg., 3919 John R, Detroit 1, Michigan.

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JMSMS



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References: 1. Bunim, J. J., et al.: J.A.M.A. 157:311, 1955. 2. Forsham, P. H., et al.: Paper presented at First Internat. Conf. on Prednisone and Prednisolone, New York, May 31-June 1, 1955. 3. Perlman, P. L., and Tolksdorf, S.: Scientific Exhibit presented at A.M.A. Annual Meet., Atlantic City, June 6-11, 1955.

**PFIZER LABORATORIES** Division, Chas. Pfizer & Co., Inc. Brooklyn 6, New York

\*brand of prednisolone

(Continued from Page 340)

### JONES CRITERIA (MODIFIED) FOR GUIDANCE IN THE DIAGNOSIS OF RHEUMATIC FEVER

#### Major Criteria

- I. Carditis
- II. Polyarthrititis
- III. Chorea
- IV. Subcutaneous nodules
- V. Erythema Marginatum

#### Minor Criteria

- I. Fever
- II. Arthralgia
- III. Prolonged P-R Interval in the ECG
- IV. Increased ESR, WBC, or presence of C-reactive protein
- V. Preceding Beta-hemolytic streptococcal infection
- VI. Previous rheumatic fever or inactive rheumatic heart disease

#### MAJOR DIAGNOSTIC CRITERIA

- I. **Carditis** As evidenced by any one of the following:
  - A. The presence of a significant apical systolic murmur,<sup>†</sup> apical mid-diastolic murmur<sup>‡</sup> or basal diastolic murmur<sup>§</sup> in an individual without a history of previous rheumatic fever or in whom there is good reason to believe there was no pre-existing rheumatic heart disease; or a change in the character of any of these murmurs under observation in an individual with previous history of rheumatic fever or rheumatic heart disease.
  - B. Obviously increasing cardiac enlargement by x-ray.
  - C. Pericarditis manifested by a friction rub, pericardial effusion, or definite electrocardiographic evidence.
  - D. Congestive heart failure (in a child or young adult under twenty-five) in the absence of other causes.
- II. **Polyarthrititis** Polyarthrititis tends to be migratory and is manifested by pain and limitation of active motion, or by tenderness, heat, redness or swelling of two or more joints. Arthralgia alone without objective evidence of joint involvement is not a major manifestation.
- III. **Chorea** This must be differentiated from habit spasm, athetosis, and cerebellar ataxia.

Movements must be characteristic, involuntary and of moderate severity if chorea is to be used as a major manifestation.

- IV. **Subcutaneous Nodules** Subcutaneous nodules are shot-like, hard bodies seen or felt over the extensor surface of certain joints, particularly elbows, knees and wrists, in the occipital region, or over the spinous processes of the thoracic and lumbar vertebrae.
- V. **Erythema Marginatum** This recurrent, pink, characteristic rash of rheumatic fever in which the color gradually fades away from its sharp scalloped edge, is found mainly over the trunk, sometimes on the extremities, but not on the face. It is transient, is brought out by heat and migrates from place to place.

#### MINOR DIAGNOSTIC CRITERIA

- I. **Fever** A significant rise in temperature is a common symptom, but, because it occurs in so many illnesses, it has little differential diagnostic value. In order to be included, the elevation in temperature must clearly exceed the normal diurnal fluctuation in which there is great individual variation.
- II. **Arthralgia** Pain clearly located without objective findings is only a minor criterion for diagnosis. The pain must be in the joint, not in the muscles or other periarticular

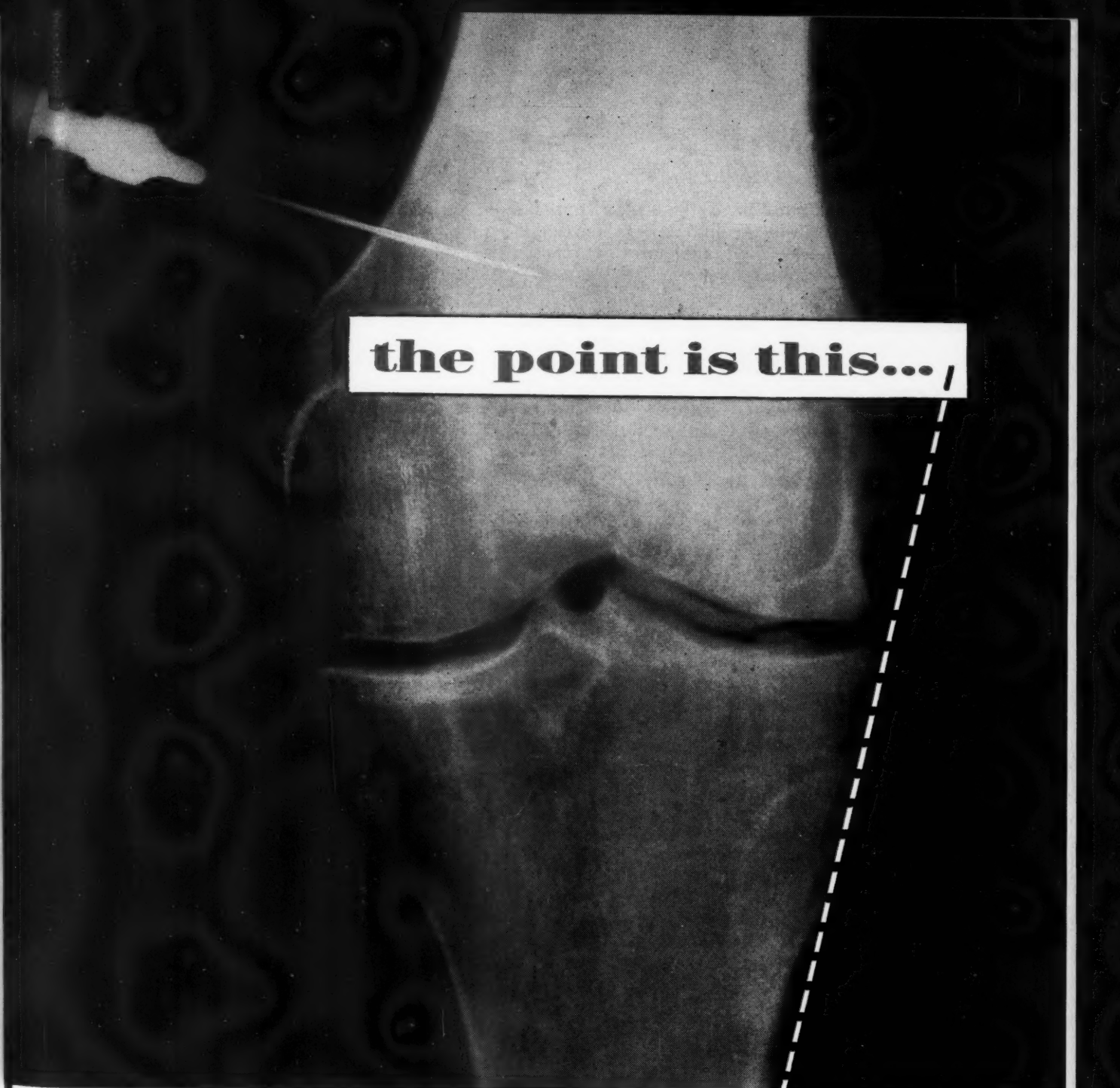
(Continued on Page 244)

<sup>†</sup>A significant apical systolic murmur is long, filling most of systole; is heard best at the apex; is as well transmitted toward the axilla as over the precordium; and does not change with position or respiration. It must be differentiated from an innocent (functional) murmur which is frequently found in normal people. This innocent murmur is systolic, occasionally harsh, is heard best along the left sternal border and usually changes with position and respiration. Borderline systolic murmurs, intermediate in location and nature, occur and should be carefully watched. Questionable murmurs which are intermittently present or which, after a period of observation, cannot be clearly classified as significant are rarely of any import.

<sup>‡</sup>A significant organic apical systolic murmur is frequently accompanied by a low-pitched, short mid-

diastolic murmur which is sharply localized to the chest wall over the apex of the heart and often heard best with a patient in the left lateral position with the breath held in expiration. This murmur, rarely present in the absence of an apical systolic murmur, confirms the significant nature of the latter. It must be differentiated from the long, low-pitched, crescendo apical pre-systolic murmur followed by an accentuated mitral first sound which is indicative of mitral stenosis but not of acute carditis.

<sup>§</sup>The development of a basal diastolic murmur of aortic insufficiency is also indicative of carditis. It is an early, short, diminuendo murmur usually heard only or heard best along the left sternal border in deep expiration. It has great diagnostic value, even though it may be difficult to hear and present only intermittently.



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## MINOR DIAGNOSTIC CRITERIA

(Continued from Page 342)

tissues, and must be distinguished from the nocturnal pain in the extremities occurring in normal children. Arthralgia must not be used as a minor criterion when polyarthritis is included as a major criterion.

- III. **Prolonged P-R Interval in the Electrocardiogram** Prolongation of the P-R interval may be nonspecific; it is considered a minor criterion and is not diagnostic of carditis. It cannot be used if carditis is already included as a major manifestation.
- IV. **Increased Erythrocyte Sedimentation Rate, Presence of C-reactive Protein, or Leukocytosis** Elevation in one or more of these nonspecific tests may be considered as a single minor criterion. Particularly to be deplored is the tendency to use any of these tests as a major criterion or as diagnostic of rheumatic fever. There are many other nonspecific tests, but these three are most commonly used.
- V. **Evidence of Preceding Beta Hemolytic Streptococcal Infection** This must be documented by (1) a history of scarlet fever or by a typical clinical picture of other streptococcal infection preceding the onset of rheumatic fever by one week to one month, the nature of the infection being confirmed by a history of immediate contact with other individuals having typical streptococcal infection or by positive culture of the nose or throat in which beta hemolytic streptococcus predominates; or (2) an elevated or rising antistreptolysin-O titer.
- VI. **Previous History of Rheumatic Fever or the Presence of Inactive Rheumatic Heart Disease** The existence of either of these may be used as a minor criterion to aid in deciding the rheumatic nature of the illness in question. For this use, the previous history must be documented by the same objective criteria as are set forth in this statement or by the presence of inactive rheumatic heart disease.

## OTHER MANIFESTATIONS

These include systemic manifestations such as loss of weight, easy fatigability, elevated sleeping pulse rate (tachycardia out of proportion to fever), malaise, sweating, pallor or anemia, and local manifestations such as epistaxis, erythema nodosum, precordial pain, abdominal pain, headache, and vomiting. These as well as a family history of rheumatic fever, provide additional evidence of the presence of rheumatic fever but are not to be included as diagnostic criteria.

There are combinations of these diagnostic criteria which occur in the presence of other ill-

nesses which must be ruled out before a definitive diagnosis is made. One combination in particular—polyarthritis, fever, and elevated sedimentation rate—is the weakest of all combinations of major and minor criteria. Diseases to be ruled out include rheumatoid arthritis, gonococcal arthritis, lupus erythematosus disseminatus, subacute bacterial endocarditis, nonspecific pericarditis with effusion, leukemia, sickle cell anemia, serum sickness (including manifestations of penicillin sensitivity), tuberculosis, poliomyelitis, undulant fever, and septicemias, particularly meningococcemia.

COMMITTEE ON STANDARDS AND CRITERIA  
FOR PROGRAMS OF CARE

David D. Rutstein, M.D., *Chairman*  
Walter Bauer, M.D.  
Albert Dorfman, M.D.  
Robert E. Gross, M.D.  
John A. Lichty, M.D.  
Helen B. Taussig, M.D.  
Ruth Whittemore, M.D.  
Miss Katherine Hagberg  
Mary E. Parker, R.N.

## YOU AND YOUR BUSINESS

## Resolutions

(Continued from Page 238)

## RESOLUTION RE HOSPITAL PRIVILEGES

WHEREAS, sufficient interest was manifested by the delegates at the last meeting of the American Medical Association in the state of tension caused by the disproportionate financial reward for surgical as opposed to diagnostic and medical procedures, with its resultant encouragement of unethical procedures and unfavorable publicity, to demand that the full report of the Special Committee on Medical Practice be made available to them, and

WHEREAS, our own delegates to the AMA can only act intelligently if they are made aware of our own feelings in the matter; be it therefore

RESOLVED: That this body go on record as strongly urging that if the following program is not already satisfactorily put into operation, it be initiated immediately:

1. That a subcommittee of the Medical Practice Committee be created to begin work on a relative value scale for the whole of the practice of medicine and surgery. Such a subcommittee could begin with the relative value scale produced by the thoracic surgeons (the only group which, as far as we can determine, has produced such a scale), and develop and broaden this approach, calling in as consultants representatives of general practice and all the specialties, as well as using the service of such nonmedical advisers as are needed.

2. That a program of public education on the value of diagnostic and medical work be fostered by the AMA Public Relations Department to increase public appreciation of non-surgical work.

3. That the AMA Public Relations Committee recommend to the various specialty boards consideration of the hardships imposed on recent diplomates by the restrictive regulations which limit their practice of their specialty during the early years of establishing a practice.

4. That the AMA, through its official channels, encourage the formation of general practice sections in the organization of hospital staffs, and that each staff applicant be evaluated on his individual merit.

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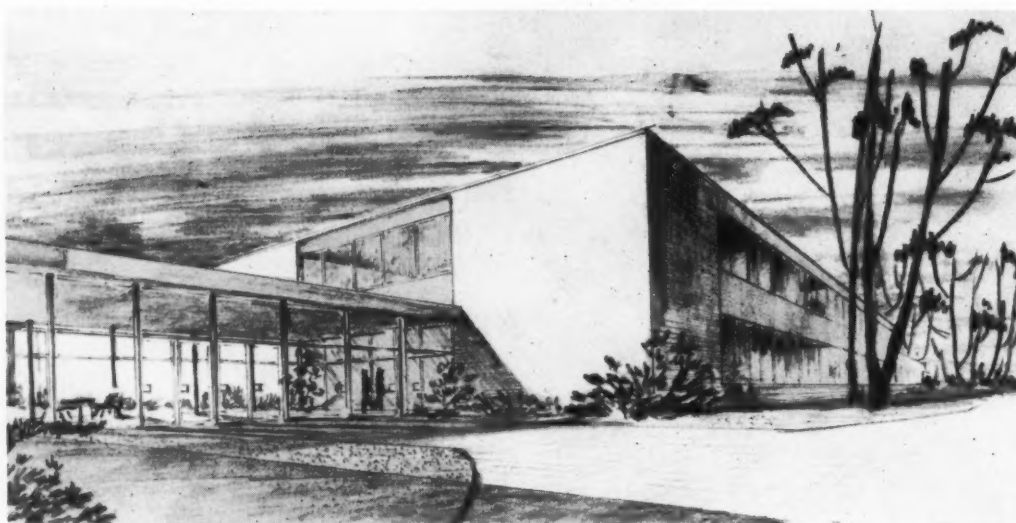
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\*Filmstab—Film sealed tablets; patent applied for.

## Wayne County Medical Society's New David Whitney House



The Wayne County Medical Society, through a vote of its membership last spring, voted to build a new David Whitney House on the site of the developing medical center area in Detroit.

During the past year, architectural plans have been developed calling for a contemporary style of structure designed to provide meeting space for both large and small groups. The building will be ideally suited for any type of society dinner or luncheon meeting.

The expressway development in Detroit will make the location of this new headquarters accessible from all points of the city.

New expansion of the medical center area promises to increase the importance of the strategic location of the building. A medical library, construction to begin this May, will be in close proximity; joined, in fact, by an underground passage. A large auditorium, similarly accessible, will be built in the near future.

Plans indicate that ideal apartment and single dwelling homes in a landscaped area will border the medical center on the east. Personnel working

in the area will have convenient and pleasant housing. Adequate parking areas have been designated. Land for expansion of the medical center has been made available toward the west and south of the medical science building, joining up with the Civic Center on the river front.

Such developments in Detroit medicine are long overdue. The Wayne County Medical Society is the fourth largest county medical organization in the United States. Detroit, a growing population center, is calling for expanded medical services, as it is also demanding new highways, educational facilities, housing and general civic development.

The physical relationship of the new headquarters to the teaching of medicine provides an opportunity for integrating medical education into the Society's program. The present and the future call for fulfilling the increasing needs for a continuing educational program for the benefit of all practitioners.

The Wayne County Medical Society can offer such a program aided with the facilities of the new David Whitney House.

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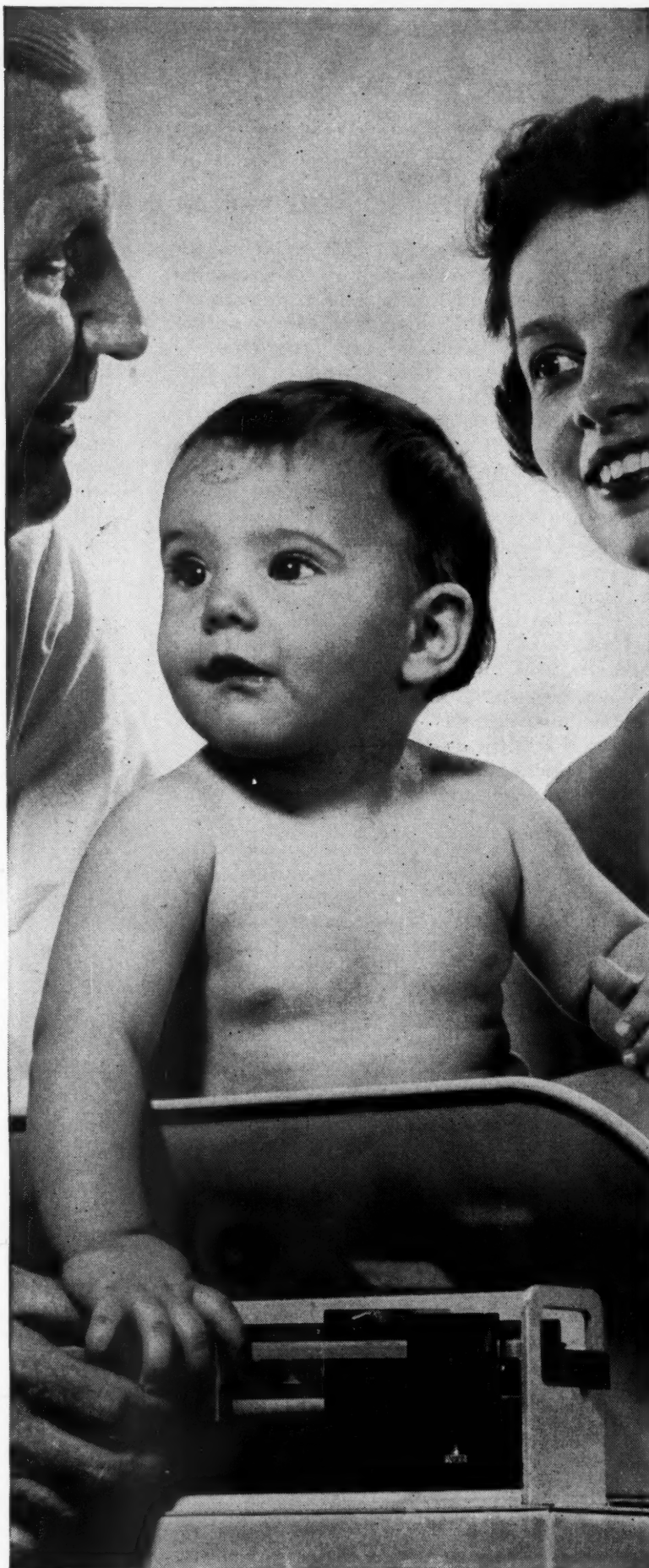
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MARCH, 1956

*Say you saw it in the Journal of the Michigan State Medical Society*

251

# AMA Washington Letter

## THE MONTH IN WASHINGTON

All too frequently overlooked in Congressional activity on health and related bills each year are the little-publicized but highly important appropriations measures—without which no program of the federal government could move forward. The appropriations hearings in the House (where all money bills must originate) rarely get headlines they are conducted behind closed doors. Weeks and some times months later, the hearings are published, but by then the bill supplying money for an agency has been reported to the House.

It's only when the measure gets to the Senate that private groups and individuals are heard—by then in open sessions. Closed House sessions are not new. That is the way it has been done ever since Congress set up a separate committee on appropriations back in 1865.

The importance of appropriations in running the federal government was clearly illustrated when the President submitted to Congress his 1,272-page budget message in which he sought \$65.9 billion for all federal programs for the fiscal year beginning July 1.

While there was no overall total of projected spending by all the agencies in the health field, the budget requests for the Department of Health, Education, and Welfare showed a sharply upward trend. And if certain new legislation is voted on this session—like the projected five-year program of construction grants for medical schools and private laboratory facilities—the total figure for subsequent years is likely to be even higher.

On the medical school-laboratory construction bill, the President asked Congress for \$40 million for the first year (estimated cost over five years is \$250 million). Construction grants, which would have to be matched on a 50-50 basis, would be available for private medical schools as well as non-federal laboratories conducting research into a wide range of crippling diseases.

The budget message also calls for another \$30 million in outright grants, to the states to help them in financing poliomyelitis vaccination programs, the same amount appropriated by Congress last session. The administration in a separate request asked for extension of the polio law, from February 15, 1956 to June 30, 1957, and both the House and Senate with only brief debate voted the seventeen-month extension. Since only half of last year's \$30 million was spent up to the February 15 expiration date of the original act, there was no rush for Congress to act on the new account.

Other new spending asked by the administration, contingent, of course, on enabling legislation, includes \$10 million for initial capitalization of mortgage loan guarantees for health facilities; \$5 million for graduate and practical nurse and professional health personnel training. \$3 million for water pollution grants; \$1.5 million for mental health expansion programs; and \$1 million for sickness and disability surveys in the United States.

If Congress approves the requests, virtually all segments of the Department of HEW will have more money to spend than in this fiscal year. None would benefit more, however, than the medical research arm of government, the National Institutes of Health. The total sought for the seven institutes is 28 per cent more than estimated spending this year. Here are some examples: National Cancer Institute, \$32,437,000. up 29 per cent; National Heart Institute, \$22,106,000, up 17 per cent, and the National Institute of Allergy and Infectious Diseases (formerly the National Microbiological Institute), \$9,799,000. a 26 per cent increase.

The President requested \$130 million for the Hill-Burton hospital-clinic construction program which will be ten years old this August. In this connection Congress has been asked to extend the act for two years beyond next year, and action is expected this session.

### Notes

After a study of possibilities in the peaceful uses of atomic energy, a panel has recommended, among other things, that the United States encourage states and private organizations to take full advantages of the opportunities offered by radioactive material for medical research and treatment.

It now appears that an improved and more uniform program of medical care for service families will be adopted this session—possibly before this is published. One feature: A \$25 deductible charge in civilian hospitals, but with the government paying the full insurance premium, and a mandatory subsistence charge in military hospitals.

Making slower progress is the plan—under consideration for more than a year—for a health insurance program for U. S. civilian workers. Here the government would pay about half the cost.

Several committees are urging stricter penalties and other changes to bring the illicit narcotic traffic under better control; so far no suggestion of more controls over the medical profession in the handling of narcotics.

# The JOURNAL

*of the Michigan State Medical Society*

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

VOLUME 55

MARCH, 1956

NUMBER 3

## Medical Education

By Gordon H. Scott, Dean  
Wayne University College of Medicine

When one is asked to prepare a statement for a special issue of THE JOURNAL of the Michigan State Medical Society devoted to one's own school, the temptation to call attention to its many advantages is almost irresistible. However, it would seem that since Michigan has two excellent medical schools, each with unique virtues, it might be well to point out some of the issues which face both, for it is only by the solution of these problems that either institution can continue to do a good educational job or even maintain its present standards. Furthermore, it seems especially apt to air these matters to the profession since it is quite clear that those things which affect the medical schools eventually reflect on the practising physician. Therefore members of the profession should be directly and personally concerned with the welfare of their parent institutions. Lack of concern in each group for the welfare of the other must eventually work to the detriment of both.

It is accepted that the modern medical school has to perform a variety of functions. It must turn out broadly educated and capable physicians; be responsible for the training of graduate physicians in the whole gamut of specialties; conduct a continuing educational program for all physicians; carry on fundamental and clinical research in many areas; provide personnel and facilities for educating future teachers and investigators in medicine and participate in a great variety of social experiments as they relate to health in its broadest aspects. In addition to this already great burden, a major portion of its faculty must care for the sick so that the proper medium will exist for its educational and research activities. This

outlook and these responsibilities, which have been gladly assumed, are the things which have made medicine great in the past and which will continue to add to its stature.

To do all those things that have come to be expected of the modern medical school usually involves more than we have and more than the public seems willing to give. Health and its maintenance is of vast importance until the time comes when it must be paid for.

The burden of graduate education and residency training alone has created a load on faculty that is becoming almost too great to be borne. Physical plants, outmoded by most standards even before the war, are rapidly reaching a state which will require replacement rather than repair. Funds for the support of research are so readily available that many faculties are being drawn into research activities to the extent that undergraduate teaching is suffering. The more exciting business of training residents has captured the interest of clinical faculties with the result that the undergraduate medical student feels lost.

The balance must be restored, and soon, or the source of good medical manpower will inevitably cease to function effectively. The rewards of attention to the important business of undergraduate medical teaching must be made commensurate with the service performed. There is no evidence at hand that leads us to believe that the demands on medical schools made by the public and by the profession will lessen. Quite the contrary—they will probably increase. These must be paid for in the proper coin.

(Continued on Page 268)

MARCH, 1956

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# History of the College of Medicine of Wayne University

By Fanny J. Anderson,  
Detroit, Michigan

THE history of the College of Medicine of Wayne University began with the founding of the Detroit Medical College in 1868. The leading spirit in the enterprise was Dr. Theodore A. McGraw, who had returned in 1865 to the city of his birth to practice medicine after serving for two years in the United States Army as a contract surgeon. In his absence Detroit had developed into a metropolis with a population of 53,000, an important port on the Great Lakes and a growing industrial center. As far as the medical profession was concerned, however, there were neither state nor local societies in existence, nor were there any laws on the statute books for the regulation of the practice of medicine.

Dr. McGraw was one of a group of young physicians who, in his own words, "had learned courage and enterprise from the War." Realizing the need for professional cohesion, these young men banded together to organize the Wayne County Medical Society on May 3, 1866, and within the same year were publishing the *Detroit Review of Medicine and Pharmacy*. Through their influence, too, the Michigan State Medical Society was formed on June 5, 1866.

They found a thriving city dependent for medical care on one hospital, St. Mary's, organized in 1845 and operated by the Sisters of Charity on Clinton Street near St. Antoine. Hospital facilities, however, were greatly augmented by the opening of Harper Hospital on January 1, 1866. Situated roughly on the east side of Woodward Avenue between Brady and Alexandrine, the new hospital was housed in a group of frame buildings erected by the Government during the Civil War for the care of wounded soldiers. With its free dispensary for the poor, it afforded the younger physicians of the city opportunities for study and observation unequalled in the state.

As early as November 24, 1865, "certain resident physicians had inquired as to the possibility of a medical college in connection with the hos-

pital offering to treat the patients gratuitously." The medical profession of the state had realized even at the time of its organization that the Medical Department of the University of Michigan in Ann Arbor lacked facilities for clinical teaching inherent in a large city. Dr. Zina Pitcher was so acutely aware of this fault that he had organized classes at St. Mary's Hospital, where he was chief of staff, for the benefit of medical students from the University, but finally abandoned the plan on the insistence of the Board of Regents. The opportunities afforded by the new Harper Hospital, reporting a total of 13,722 patients from March 1, 1867, to September 1, 1868, in addition to "dispensary" patients, were not overlooked. On March 27, 1868, a request was presented to the medical board of the hospital from Drs. Pitcher, Farrand, McGraw and Jenks and Professors Gunn, Palmer and Sager of the Medical Department of the University asking "what facilities could and would be furnished by the board to the faculty of the University if they should conclude to establish a medical school in Detroit."

Evidently nothing resulted from this request, for, one month later, under date of April 11, 1868, "Dr. McGraw submitted some suggestions to the board of trustees of Harper Hospital relative to the organization of a medical college." Trustees for the new school were appointed on May 18 and incorporation followed on June 11, 1868, the Articles of Association providing for capital stock to the amount of \$30,000 in 1200 shares of twenty-five dollars each, the sum of \$20,000 being paid in.

The first prospectus of the Detroit Medical College confirmed the high expectations for the new venture. The Board of Trustees was composed of men who were prominent and respected in the public life of the community. Dr. Edward W. Jenks was President of the Faculty and Professor of Obstetrics and Diseases of Women and Children; Theodore A. McGraw, Secretary and Professor of the Principles and Practice of Surgery and Clinical Surgery; George P. Andrews, Professor of the Principles of Medicine and

Mrs. Anderson is a member of the staff of the Library, Wayne University College of Medicine.

Microscopy; Samuel P. Duffield, Professor of Chemistry and Toxicology; C. B. Gilbert, Professor of Materia Medica and Therapeutics; William H. Lathrop, Professor of Physiology and General Pathology; James F. Noyes, Professor of Ophthalmology; N. W. Webber, Professor of General and Descriptive Anatomy; J. M. Bigelow, Professor of Medical Botany; P. P. Gilmartin, Adjunct Professor of Obstetrics and Lecturer on Medical Jurisprudence; H. O. Walker, Demonstrator of Anatomy.

Two buildings were leased from the hospital and adapted for the accommodation of 250 students. After the "preliminary course" which began on November 1, 1868, the "regular course" opened on February 2, 1869, and extended to June 5. Thirty-eight students received their degrees at the first commencement exercises at which a special oath was administered to the class. Dr. McGraw was the speaker for the occasion. An appropriate motto chosen for the college appeared upon the diplomas, *Salus populi suprema lex* (Safety of the people is the highest law).

Among the matriculants in 1871 was Henry Fitzbutler of Ontario, the first negro student to attend the institution. He was later graduated from the University of Michigan Medical Department and founded the Louisville National Medical College in 1888.

In 1872, the Michigan State Medical Society reported the results of a visit of inspection to the Detroit Medical College. "Twenty-three didactic lectures were given each week covering the subjects of anatomy, chemistry, physiology, obstetrics, diseases of women and children, practice of medicine, surgery, materia medica, insanity, medical jurisprudence, venereal diseases, and diseases of the eye and ear." They were "illustrated by the free use of the blackboard, diagrams, the cadaver, experiments, et cetera." Requirements for graduation included "dissection of the entire cadaver, a full course in the analysis of urine, chemical analysis and manipulation, attendance at two full courses of lectures and presentation of two medical essays on subjects chosen by the faculty"; three years spent in the study of medicine under the direction of a preceptor was a further requisite. The committee was also impressed with the clinical instruction offered by the two hospitals of the city: Harper, with accommodations for 100 patients and St. Mary's, with accommodations for sixty. In addition, the college maintained two dis-

pensaries, open daily, one in the college building and the other at St. Mary's Hospital. Since the state provided no regulation of licensure at this time, a diploma from a medical college admitted the graduate to the practice of medicine.

Even though the state was indifferent to its responsibilities, the college was actively concerned with the organization of the Association of American Medical Colleges in 1876, the objective of which was "to consider all matters relating to reform in medical college work." Dr. Leartus Connor served as secretary and treasurer from its inception until its demise in 1883. Its dissolution then was caused by the withdrawal of the eastern members when the western schools attempted to raise requirements for a medical degree. A number of innovations advocated by the association were introduced into the curriculum of the school in its 1881-82 session. These consisted of a preliminary examination, lengthening of the regular term to six months, obligatory attendance on three terms of lectures instead of two, and the grading of courses. Increased practical work in the anatomical, chemical, pharmaceutical and physiological laboratories was required in the first two years and daily clinical work in the last year. Vivisection was "a specialty" of the college.

The catalogs of the school reflect the changes and expansion of succeeding years. The year 1875 was memorable for the organization of the Alumni Association. In 1879, Dr. McGraw became president and Dr. Connor, secretary. In the same year, St. Mary's Hospital opened its new building for patients on St. Antoine between Clinton and Mullett Streets and two blocks away, a rival medical school, the Michigan College of Medicine, opened its doors. According to the catalog of 1882-83, a board of counsellors composed of twenty-nine physicians living in the lower section of the state was responsible for examining candidates of the college for graduation. The school had recently acquired the museum of the Detroit Scientific Association and the library of the Detroit Mechanics' Society, consisting of several thousand volumes, "all of which will be thrown open at certain hours for the students free of charge." In 1884 the curriculum included "a short course in the histological laboratory" and lectures on nervous and mental diseases which were supplemented by visits to St. Joseph's Retreat for the Insane near Dearborn. The pathological labora-

tory, "this new but in the present day necessary laboratory," was under the direction of Dr. George Duffield.

On September 12, 1883, the college moved into its new home on Farmer Street between Monroe and Gratiot, which had been purchased from the Young Men's Christian Association in 1882 for the sum of \$15,000. Rumors had begun to circulate as early as 1883 that the Detroit Medical College planned to unite with the Michigan College of Medicine. Although classes were graduated from both institutions in 1885, consolidation was well under way.

#### Michigan College of Medicine

Drs. C. Henri Leonard and Charles J. Lundy were the original instigators of the Michigan College of Medicine which was incorporated on October 24, 1879. A joint stock company was formed with a capital of \$30,000. Physicians wishing to become members of the faculty paid \$1000 for "leading chairs" and from \$500 to \$1000 for other appointments. A brick building, the former Hotel Hesse, located on the corner of Gratiot, Catherine and St. Antoine Streets, was purchased and a dispensary opened in 1879, although the preliminary session for students was not held until March 2, 1880. The regular session followed in September of that year.

The Board of Trustees of this school were men who were well known in the business and professional life of the city. Members of the faculty were the following: Henry M. Lyster, President of the Faculty and Professor of the Principles and Practice of Medicine; William Brodie, Professor of Clinical Medicine; J. B. Book, Professor of Obstetrics, Clinical Midwifery and the Clinical Diseases of Children; Daniel LaFerte, Professor of Anatomy, Orthopedic Surgery and Clinical Surgery; John J. Mulheron, Professor of Materia Medica and Therapeutics; C. Henri Leonard, Professor of Medical and Surgical Diseases of Women and Clinical Gynecology; Charles Douglas, Professor of Diseases of Children and Clinical Medicine; Theodore F. Kerr, Professor of Physiology, Histology and Genito-Urinary Diseases; Charles C. Yemans, Professor of Diseases of the Skin; Duncan McLeod, Professor of Hygiene and Sanitary Science; Eugene Smith, Professor of Ophthalmology and Clinical Ophthalmology; Charles J. Lundy, Professor of Clinical Diseases of the Eye and Diseases of the Ear and Throat; J. E.

Clark, Professor of Medical Chemistry and Physics; William C. Maybury, Professor of Medical Jurisprudence; Charles Jungk, Professor of General Chemistry; Gus Schulenberg, Prosector to the Chair of Surgery; Williard Chaney, Assistant to the Chairs of Physiology and Laryngology; Aloys A. Thuner, Director of the Dispensary; Herbert W. Yemans, Clinical Clerk for the Medical Department.

Like its rival, the Michigan College of Medicine was pledged to uphold the highest standards in medical education and sent representatives to meetings of the Association of American Medical Colleges. It "demanded a matriculation examination recognized by the Council of Great Britain and Ireland," and requirements for graduation included "three graded courses of six months each in three separate years." The teaching of anatomy in all the medical schools of the state was greatly simplified in 1881 with the passage of a law whereby the demonstrator of anatomy at the University of Michigan was made the receiver of cadavers from the prisons and poor houses of the state and became the distributor to the medical colleges. This ended the type of episode featured in the headlines of the local papers under such captions as, "Resurrected," "Grave Robbers Invade Precincts of Mt. Elliott Cemetery."

A hospital of twenty-five beds was established on the second floor of the college building on September 4, 1880. With the Dispensary and the Eye and Ear Infirmary it supplied facilities for clinical teaching. The Detroit Training School for Nurses under the direction of Mrs. Florence Nightingale Davies, a graduate of the New York Training School for Nurses, was instituted in connection with the hospital, and the first lecture of a two-year nursing course was presented by Dr. LaFerte on March 11, 1882.

No mention was made of a training school, however, when the faculty announced plans for enlarging the hospital to sixty beds chiefly to accommodate accident cases. In this connection, the college took great pride in its two ambulances and claimed to have owned the first one ever used in Detroit in 1880. A prepaid medical insurance scheme was proposed for raising funds whereby hospital tickets were issued to subscribers for five dollars entitling the holders to all hospital privileges for one year either in case of accident or acute disease. This met with immediate protests from the medical profession of the city.

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In spite of denials to the contrary, early in 1885, a bill was passed by the state legislature permitting the stockholders of the two medical colleges to vote upon amalgamation. Representatives of Harper Hospital and the three medical schools of the state—the Detroit Medical College, the Michigan College of Medicine and the Medical Department of the University—saw an opportunity in the proposed union of the Detroit schools for developing a stronger Medical Department at the University of Michigan, which continued to be handicapped by a lack of hospital and clinical facilities. Dr. Donald MacLean, a prominent surgeon and professor of surgery in the University, was their host at a meeting held in Detroit on February 24, 1885. A plan was discussed whereby the three medical schools would unite into one institution, the Medical Department of the University, "the fundamental branches to be taught as at present in Ann Arbor, the practical and clinical subjects to be taught in Detroit, the hospital and other facilities being furnished to the school and to the University free of expense" by Harper Hospital. A committee to study the proposal was appointed consisting of President James B. Angell, chairman; Dr. Donald McLean, secretary; former Governor Baldwin, General Luther Trowbridge, Jacob S. Farrand, Dr. Theodore A. McGraw, Dr. H. F. Lyster and Dr. A. B. Palmer. But the long-standing policy of the board of regents against removing any part of the University from Ann Arbor blocked the scheme and the union of the Detroit schools proceeded. Articles of Agreement were drawn up and signed by both parties on June 6, 1885. The new school, to be known as the Detroit College of Medicine and Surgery, was incorporated for thirty years, with capital stock amounting to \$100,000, in shares of twenty-five dollars of which the stockholders of each college received an amount equal to the value of the stock transferred by them. The new institution was to be governed by a board of trustees of fifteen members, not more than six being physicians. Professors of "practical chairs" were required to hold stock amounting to \$300 fully paid; professors of "impractical chairs" (anatomy, physiology, materia medica, histology and microscopy, chemistry, medical jurisprudence, state medicine and hygiene, pathological anatomy) were required to hold \$150 worth of stock, fully paid. Professors of both of the former colleges were to hold the same chairs in the new school as they had held before the merger, each professor dividing his

chair with the corresponding professor of the other institution. Union of the two alumni associations became effective on March 3, 1885.

The new college of medicine opened its regular session on September 23, 1885, in the building formerly owned by the Michigan College of Medicine on the corner of Gratiot Avenue, St. Antoine and Catherine Streets. Dr. McGraw was president and Dr. Charles J. Lundy secretary of a faculty numbering twenty-eight professors and eight assistants, two lecturers and two demonstrators. The school was affiliated with Harper, St. Luke's and St. Mary's Hospitals and with St. Mary's Free Eye and Ear Infirmary. In addition, it operated its own eye and ear infirmary as well as an ambulance "where cases of accident and emergency are treated in the presence of the class prior to removal to one of the general hospitals." Plans were announced by the trustees for a new building late in 1888 to be erected on the northeast corner of St. Antoine and Mullett Streets.

The decade from 1890 to 1900 was a period of expansion. A College of Veterinary Surgery was opened as a department of the college on September 23, 1891, with Dr. H. O. Walker as Dean of the Faculty. Animals condemned by the agent of the Humane Society were utilized for teaching purposes. In 1895, the Detroit School of Anatomy and Scientific Horseshoeing was added under the auspices of the new department. A Department of Pharmacy, which was co-educational, was established on January 5, 1891, with Dr. J. E. Clarke as Dean. The Department of Dental Surgery held its first session on September 21, 1891, and its last announcement was issued for the session of 1909-10. Its journal, *The Odontoblast*, was published by students and the alumni association from 1896 to 1909. Indeed, there was considerable discussion of expanding the college into a university, possibly including the Detroit College of Law and the Detroit Museum of Art. This idea was introduced by General Trowbridge at commencement in 1892, and was endorsed by the Alumni Association at its annual meeting in 1894. It was at this same meeting that the alumni decided to publish a journal to be known as the *Leucocyte*. From May 8 to 11, 1899, they held their first annual clinic session in conjunction with their reunion.

By 1897, the college had improved its physical plant to provide quarters for its various activities. An addition to the main building had been constructed in 1892 for the Department of Dental

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Surgery. After a destructive fire on December 17, 1896, the Trustees rebuilt on the same site, taking advantage of the opportunity to make a number of improvements. A new laboratory building was also constructed on Mullet Street to provide additional laboratory space.

The institution appeared to be in a prosperous condition. During the session of 1898-99, 191 students were enrolled in the medical school, forty-eight in the fourth year, which became a requisite in 1895. In the session of 1900-01, there were 226 with fifty-eight in the fourth year. The cost of a medical education at this time amounted approximately to the following: matriculation or registration, \$5.00; lectures for each regular term, \$60; hospital tickets for each regular term, \$10; fee for practical obstetrics, senior year, \$10; graduation or final examination, \$30; laboratory fees, each \$10.

The turn of the century heralded many changes in medicine, and particularly in the field of medical education. The Association of American Medical Colleges, of which the school was a member, had been revived in 1890. In 1899, Michigan, like many other states in the union, recognized the necessity for legislation regulating the practice of medicine, and, as a result the State Board of Registration in Medicine was created. According to the announcement of 1900-01, "acting under authority reposed in it, this board has approved and designated certain medical colleges as institutions whose graduates are entitled to registration without examination. Detroit College of Medicine has been so approved and so designated."

After 1900, the college found it necessary to cope with new trends in the reform of medical education. In 1904, the American Medical Association created the Council on Medical Education and Hospitals "to act as its agent in efforts to elevate standards of medical education. Its functions were to make an annual report on existing conditions of medical education and make suggestions which may lead to gradual improvement in these conditions." A fateful visit was made to the school in December, 1909, by Abraham Flexner, who was engaged in making a survey of the medical colleges of the country under the auspices of the Carnegie Institution for the Advancement of Teaching. The survey was conducted with the co-operation of the American Medical Association and had far reaching effects in raising the standards of medical education in the United States. The report on the

Detroit College of Medicine included the following points of criticism:

Entrance qualifications, four-year high school diploma or equivalent, strictly enforced by the college; attendance, 161, 70 per cent from Michigan, 16 per cent from Canada; teaching staff, 104, twenty-five professors, seventy-nine other grades, no full-time teachers; resources available for maintenance, fees only, amounting to \$22,000 (estimate), laboratories—separate, ordinary equipment for following subjects: chemistry, anatomy, physiology, pathology, clinical microscopy, histology, bacteriology; some additional equipment—museum, charts, books, other teaching adjuncts; clinical facilities, access to several hospitals where faculty are on the staff, obstetrical work mainly furnished by Woman's Hospital and by the Out-patient Department just started; post mortems hard to get; dispensary service, fair.

The college suffered a lethal blow in November, 1912, when it was given a Class B rating following an official survey by the American Medical Association. This was not wholly unexpected. The alumni association had been considering ways and means of securing an endowment fund since it had become known that the school was in dire financial straits. This state of affairs was not due to any mismanagement on the part of the trustees, but to the increased demands of medical education. Tuition from students now covered only one third of the actual cost of operation. On December 13, 1912, the Executive Committee of the Alumni Association, composed of Drs. E. W. Mooney, F. N. Blanchard, James Cleland, C. D. Brooks and R. C. Andries, drew up and signed a petition which was sent to the faculty and trustees, requesting them to make every effort to restore the college to its former standard of Class A.

It was now forty-four years since the Detroit Medical College had been founded. Dr. McGraw had reached the age of seventy-three. Dr. Don Campbell appraised the work of this quiet unassuming man in 1921 following his death:

This school was conceived, founded and started by Dr. McGraw in 1869. To its development and growth he devoted many years of his life, into it he injected his own ideals of life, efficiency and uprightness, and it is chiefly to his influence that it was able to maintain its collegiate existence through that trying period of readjustment in the standards of medical education which saw so many similarly equipped schools go down to oblivion.

In the Detroit College of Medicine there was a certain vitality nurtured by this great man and augmented by an honorable and efficient past, under whose guidance it was given the strength of character to withstand the

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ordeals of the reorganization period and adjust itself to new conditions. Can any man say how much Dr. McGraw's high character and idealism contributed to this result?

A number of the faculty and trustees were contemporaries of Dr. McGraw and well advanced in years. They decided to sell the college outright to the highest bidder.

Fortunately for the future of the institution, Dr. Burt R. Shurly was President of the Alumni Association at this crucial time. At a meeting of the Board of Trustees, when an offer of \$75,000 cash was made by the University of Detroit, he raised the bid to \$76,000 cash and the Detroit College of Medicine was sold to him personally. Mr. Sidney T. Miller, Drs. Angus McLean, Don Campbell and Frank Walker participated in the transaction. The Association worked quickly and within a few days had raised \$100,000, \$61,000 of which was used to purchase the college property.

The American Medical Association had made certain stipulations for restoring the college to Grade A rating, and measures were immediately taken to comply with them. In May, 1913, the alumni pledged themselves to raise one million dollars in order to own and control the school, to provide scholarships and to establish a library fund. Conforming with the specification for premedical training, Dr. Shurly was instrumental in introducing requisite courses at Albion, Alma, Hope, Kalamazoo and Adrian Colleges. In association with David MacKenzie, then principal of Central High School, he organized a junior college which was prepared to offer a one-year course in biology, chemistry, French, German and English.

The school was re-organized and incorporated on August 19, 1913, under the name of The Detroit College of Medicine and Surgery. Sidney T. Miller was elected President of the Trustees. Dr. J. Henry Carstens, President, Dr. Shurly, Dean, and Dr. Frank Walker, Secretary, headed a teaching staff divided into ten departments and ten sub-departments. One of the objectives of the Alumni Association was attained in 1914 when the American Medical Association restored the college to Class A standing.

However, the institution was still beset by financial difficulties, and the question of merging with the Medical School of the University of Michigan had caused strife since the reorganization. The American Medical Association had recommended

the union on the grounds that two schools within forty miles of each other was a duplication of effort. In February, 1917, the Board of Regents of the University adopted resolutions governing the establishment of a Graduate School of Medicine in Detroit:

"Resolved: That the Regents undertake the administration of a graduate school when the Detroit College of Medicine and Surgery shall have first surrendered its charter, conveyed to the Regents all real estate and equipment of which it is possessed, together with all rights and privileges in the hospitals of Detroit which it now enjoys and shall exert through its trustees and faculty its influence in continuing and extending such rights and privileges; (2) That rights deemed adequate by the Regents be secured to the University from Harper Hospital and other hospitals for the purpose of instruction in medicine and surgery and that a fund of not less than one million dollars shall first have been created in cash or approved securities to be transferred to and invested by the Regents for the benefit of said graduate school of medicine and surgery."

By April, 1917, the United States had entered the European War and the college came under government supervision. For a time, there were two military units in the school and the main building was remodeled for their use according to plans furnished by the War Department. During the session of 1916-17, 161 students were enrolled, sixty-four in the graduating class. Women were enrolled for the first time in 1917. Lt. Colonel Burt Shurly headed Base Hospital No. 36 from the Detroit College of Medicine and Surgery, the first 100-bed unit in the country. Before his departure, Dr. Shurly recommended the appointment of Dr. Walter H. McCracken, formerly Professor of Pharmacology, as Secretary of the school, which appointment was accepted by the Trustees.

By 1917, the college was in a precarious position, financially. It was impossible to raise funds for its support due to war-time demands. Oscar Marx, mayor of Detroit, was approached as to the possibility of securing aid either from the Community Chest or from the city, for the college was contributing generously to the war effort by training doctors, but money from these sources was not available. However, the mayor promised to try to secure the necessary money for maintenance should the Board of Education agree to supervise its expenditure.

The idea of incorporating the school as a unit of the contemplated College of the City of Detroit was discussed by Dr. R. L. Clark, President of the

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Alumni Association; Dr. W. H. McCracken and Dr. Andrew P. Biddle, President-elect of the Board of Education; and they immediately proceeded to plan a campaign to achieve their purpose. As the first step, the Trustees withdrew the agreement with the University of Michigan. Publicity was effectively used to secure the support of alumni, the press, women's clubs and organizations of business and professional men. On February 18, 1918, Sidney T. Miller addressed a letter to the Board of Education in which he pointed out that all medical schools had been forced to ask for help due to the rise in the cost of medical education. He also drew attention to the long and honorable history of the college and to the fact that sixty pupils were preparing for a medical course at Central High School.

The Trustees request that the Board of Education ask the Common Council and the Board of Estimates for \$30,000 and that the Board of Education take over and

have entire management and charge of the medical school, the Trustees of the latter to keep charge of the granting of diplomas to the graduates until legislation can be obtained giving the Detroit Board of Education power to grant degrees, and the Detroit College of Medicine and Surgery will then surrender its charter and transfer to the Board of Education the full management of the medical school and all the buildings, real estate and equipment free of charge and free of debt.

It was not until October 23, 1919, proper legislation having been passed, that the Detroit College of Medicine and Surgery was transferred officially to the Board of Education. The college now formed an important unit in the rapidly developing College of the City of Detroit and, in 1933, when that institution adopted the name of the Revolutionary hero, Anthony Wayne, the Detroit College of Medicine and Surgery became the College of Medicine of Wayne University. A dream of the founders of the old medical school had materialized.

## MEDICAL EDUCATION

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Each of us is aware of the immensity of the population problem that is faced by all educational institutions in Michigan. Your medical schools cannot shrug it off as a thing which will not directly impinge upon them and their activities. By the same token, the medical profession cannot remain unaffected by it. Together, they must decide which of two paths to follow—let nature take its course which can mean disaster, or do some constructive planning against the time when the necessities must be cared for. If it can be decided that planning is desirable, it must proceed step-wise. Then the only arguments that can be raised are these: Which steps should be taken and in what order should they be taken?

It would seem logical that the first order of business would be to determine what our existing medical schools' needs actually are in the way of physical plant, faculties and support to bring them to the peak of efficiency and orderly operation. In such a study, there must be a clean separation of real needs and those things which would be nice

to have. Both are using tax monies, and the use should be wise and consistent with reality. When the existing schools are doing all they can reasonably be expected to do with first-class plants, then is the time to anticipate what more will be needed to do the job the state requires. The establishment and operation of a medical school is a costly business and should not be rushed into lightly in a period of prosperity. However, if the need exists, it should be undertaken as readily as any other educational responsibility. If it is not, then we can be sure that the proprietary-type school and all of its evils will find some way of returning to the scene.

This, then, is a plea for an orderly and realistic appraisal of the needs of medical education in Michigan and a careful inventory of the facilities which we possess. The study should be one in which the profession has a part, and having participated they will stand ready to exert such effort as is necessary to see that the needs are met.

# Epithelium-like Cells Derived from Tissue Cultures of Human Bone Marrow and Ascitic Fluid

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IN a previous communication a report was made of the establishment of a stable strain of human epithelium-like cells from tissue culture of the bone marrow of a patient with carcinoma of the lung.<sup>1</sup> This strain of cells (Detroit-6) fulfills certain criteria<sup>9</sup> for virological research. They grow rapidly in simple media on glass surfaces from which they can be released by trypsin for the preparation of suspensions of cells from which replicate cultures can be made. The virus susceptibilities of the Detroit-6 strain of cells have been described.<sup>8</sup> The close similarities of Detroit-6 and HeLa cells with respect to morphologic and growth behavior as well as virus susceptibilities were pointed out.<sup>1,8</sup> Further studies with methods previously described have resulted in the development of five additional strains of cells with similar morphologic and growth characteristics.

## Methods

The procedures used are described in detail in our original report.<sup>1</sup> Briefly, the aspirated specimens of bone marrow or ascitic fluids were placed in a medium consisting of balanced salt solution, human cord serum, embryonic tissue extract and a pH indicator in 3-ounce medicine bottles lying on their flat sides. In all instances the epithelium-like cells first appeared in the cultures as isolated plaques of polygonal cells sometime after the appearance of a fibroblastic phase of growth. Originally the plaques of polygonal cells were removed mechanically for making subcultures which thereafter continued to grow as sheets of polygonal cells. In subsequent cultures it was found that

frequent division and subculture of specimens containing both fibroblastic and polygonal cells were ultimately overgrown by the latter. There has been no reversion of once-established polygonal or epithelium-like cell cultures to a fibroblastic form.

Three of the new strains, namely, Detroit-32, Detroit-34, and Detroit-52 were obtained from cultures of sternal bone marrow and the other two, Detroit-30A and Detroit-56A were cultured from carcinomatous ascitic fluids.

Figures 1 through 6 illustrate the appearances of these cells grown on glass coverslips. Table I includes information pertaining to the histories of the various strains.

## Discussion

The Detroit strains grow in the fashion of epithelium<sup>2,10</sup> and, by ordinary methods of light microscopy, are not distinguishable from the cells of the HeLa strain isolated by Gey et al<sup>6</sup> from a carcinoma of the cervix. Nevertheless, in view of the difficulties in distinguishing between true epithelial cells and other types of cells in tissue cultures we have designated them as epithelium-like cells, using criteria similar to those stated by Chang<sup>3</sup> and Southam.<sup>7</sup> Inasmuch as the Detroit strains, as well as those isolated by Chang from normal human tissues, by Frisch<sup>5</sup> from pleural fluid of a patient with adenocarcinoma of the lung, by Southam from various normal and malignant tissues, all may have contained cells other than an epithelial component, it is not permissible to assume that they are truly epithelial. Because of the fact that their morphologic characteristics and growth behavior are similar to that of epithelium, they can be considered epithelium-like. The usefulness of such strains of cells derives from their human origin and their susceptibility to handling in bulk without modification of form and in a manner permitting the making of replicate samples. According to the recommendations made by

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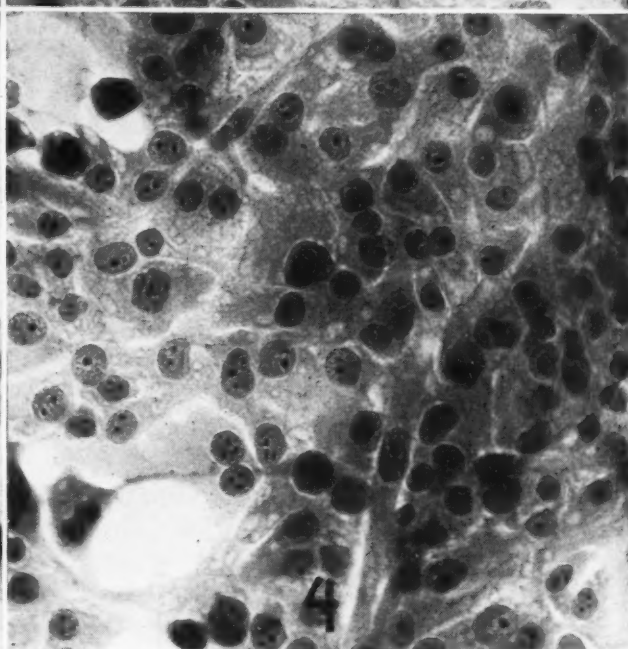
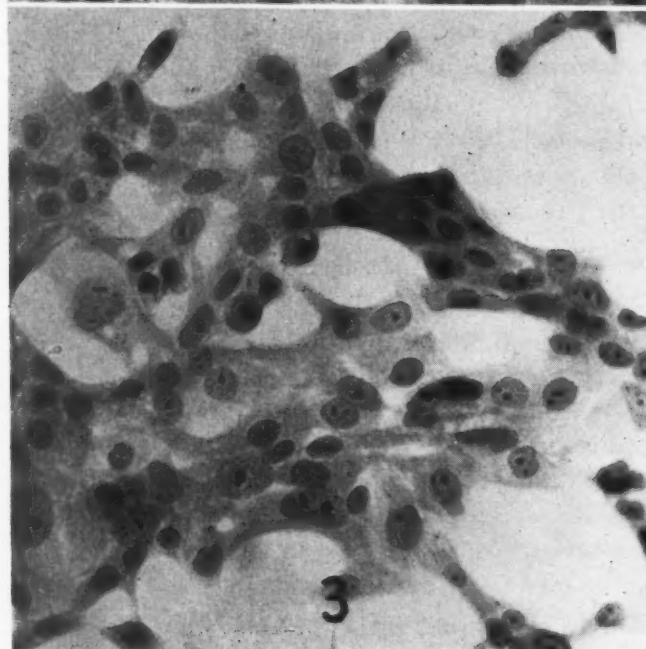
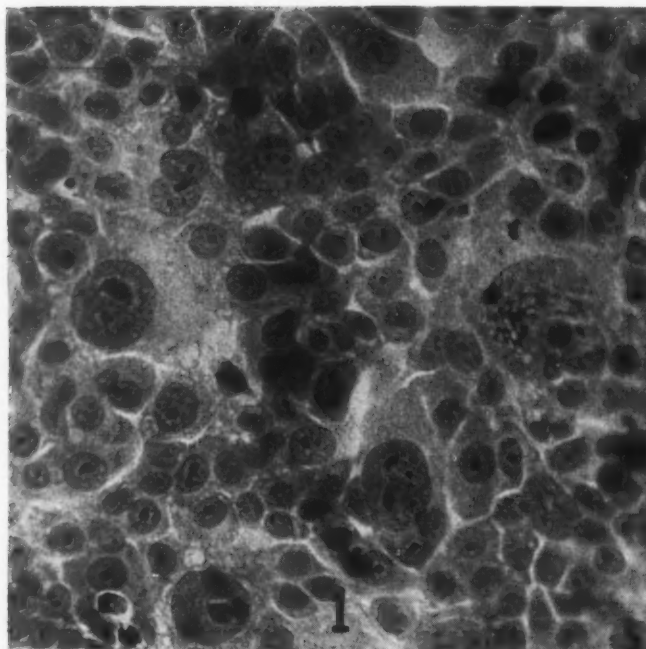


Fig. 1. Detroit-6 cells. 280X  
Fig. 3. Detroit-32 cells. 280X

Fig. 2. Detroit-30A cells. 280X  
Fig. 4. Detroit-34 cells. 280X

Earle\* the Detroit-6 strain can be considered an established strain and the others, having been maintained continuously for periods over six months but less than one year in a reasonable state of equilibrium, qualify as newly established strains.

As recently as 1954, it was stated by Chang that epithelium-like cells have been successfully cultivated *in vitro* from various human tissues but that continuous subcultivation of epithelium-like cells derived from normal human tissue had not been reported. To this it can be added that continuous

cultivation of stable strains of malignant human cells has, up to recently, been a difficult problem.

Although the cells of the Detroit strains exhibit many of the classical features of malignant cells (irregularity in size and basophilia, polyploidy, abnormal mitoses, rapid growth), the peculiar conditions of *in vitro* growth must be taken into account as a cause of the aberrant growth behavior of epithelium-like cells. A determination of the possible malignant characteristics of epithelium-like cells must be based on the biologic activities of

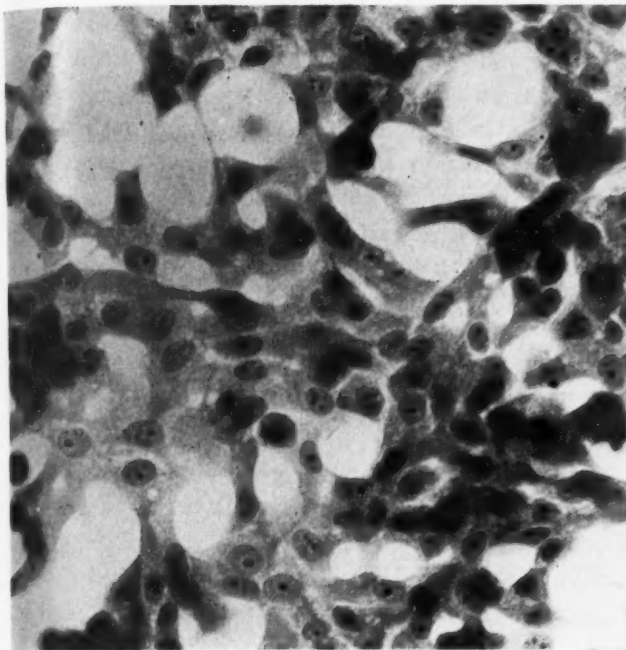


Fig. 5. Detroit-52 cells. 280X

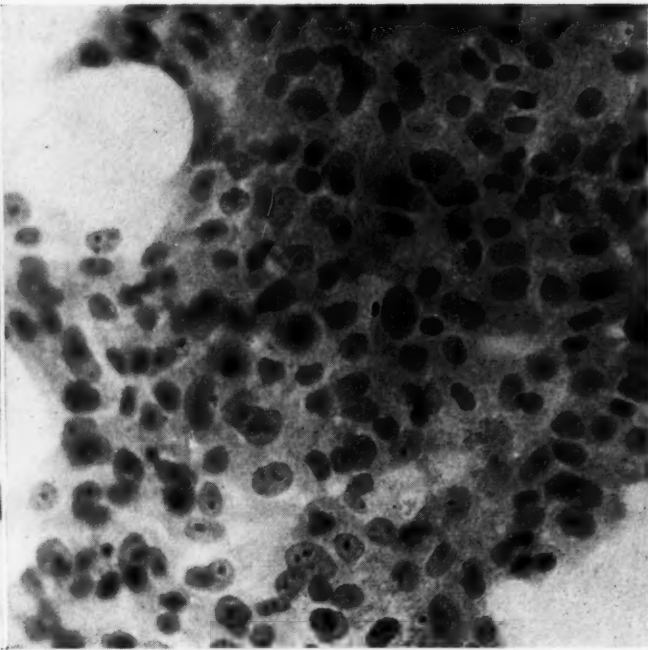


Fig. 6. Detroit-56A cells. 280X

TABLE I. HISTORIES OF DETROIT STRAINS OF EPITHELIUM-LIKE CELLS

Cell Type and Source*	Patient	Diagnosis	Biopsy	Date of Explant	Plaques**
Detroit-6 S.m.	WM58	Carcinoma of lung	Mass in lung	9-28-54	51
-30A A.f.	NF43	Carcinoma of breast; Carcinomatous ascites	Mass in breast; Malignant cells in ascitic fluid	1-14-55	24
-32 S.m.	WF57	Carcinomatosis; primary site undetermined	Malignant cells in pleural fluid	2-17-55	65
-34 S.m.	WM65	Metastatic carcinoma of bone	Tumor of femur	3-10-55	51
-52 S.m.	WF64	Diabetes mellitus	None	6-1-55	57
-56A A.f.	WM50	Carcinomatosis; primary site undetermined	Malignant cells in ascitic fluid	6-15-55	55

\*S.m.—Sternal marrow; A.f.—Ascitic fluid.

\*\*Day of cultivation when plaques first appeared in cultures.

such cells rather than their morphologic appearances alone.<sup>7</sup> This fact has become evident from our observations of three cultures of special importance. One of these cultures from which the Detroit-52 strain was isolated has developed from the sternal bone marrow of a patient with diabetes mellitus in whom there is no present evidence of malignant disease. Another, the Detroit-116P strain, was developed from the pleural fluid of a patient with lymphosarcoma. The pleural fluid contained lymphocytes and lymphoblasts but epithelial cells were not present. Recently, we have isolated an additional epithelium-like strain (Detroit-98) from the marrow of another individual without evidence of malignant disease after very thorough investigation. These two strains which developed from apparently non-carcinomatous sources will be described in detail elsewhere. The fact that all the Detroit strains are epithelium-like raises serious questions on the validity of identify-

ing epithelium in tissue cultures from bone marrow, pleural or ascitic fluids, although the usefulness of such human cell strains for certain types of research is not impaired.

Present indications are that bone marrow, ascitic and pleural fluids may become useful sources for the development of stable cell strains of human cells.

#### Summary and Conclusions

One stable strain (Detroit-6), five additional newly established strains (Detroit-30A, -32, -34, -52, -56A) of polygonal cells which grow in sheets on glass surfaces have been isolated from human bone marrow and ascitic fluids. Their morphologic and growth characteristics are similar to those of epithelial cells. Although five of the strains have been developed from marrow or ascitic cells of patients known to have carcinomatosis, the malig-

(Continued on Page 295)

# A Modern Theory of Blood Clotting

By Walter H. Seegers, Ph.D., Sc.D.  
Detroit, Michigan

THE clotting of blood is an exceedingly complex phenomenon of great importance to our health. It consists of a large number of chemical interactions and there has always been a desire to describe these in detail. With the required information being only partially available, theories have been used to great advantage. Even now, with the extensive information on record, I find it useful to consider the chemical events in the clotting of blood in connection with some speculation. When new information becomes well established, it does not represent a dry fact alone, but also raises new questions not considered before. One looks at the field from a higher level, formulates new working hypothesis, and collects more information for nourishing the mind. Our view thus becomes more comprehensive, more practical, more useful, and more wonderful with our continuing attention to this aspect of our physiology. What I have written below constitutes an attempt to be accurate and conservative, but it is also to be regarded as theoretical.

The great discoveries in recent years have developed the field unevenly. There seems to be far greater information of an advanced nature; for example, about the conversion of fibrinogen to fibrin, the activation of prothrombin, the inactivation of thrombin, than there is about the inhibition of prothrombin activation, the relation of blood clotting to the physiology of hemostasis, or the mechanisms whereby clots are dissolved. The underdeveloped areas of our knowledge are logically the research opportunities for the immediate future, and it is easy to see how growth in those directions can be facilitated by applying the knowledge gained so recently.

First, a broad survey of concepts may be considered with the use of the diagram in Figure 1. For its interpretation the chemistry of blood coagulation is considered to be divided into four main concepts.

From the Department of Physiology and Pharmacology, Wayne University, College of Medicine. This investigation was supported by a research grant from the Michigan Heart Association.

1. Prothrombin activates itself to thrombin by means of activators such as, calcium ions, thromboplastin, Ac-globulin, platelet derivatives, platelet cofactor I, autoprothrombin, autothrombin II and other activators.

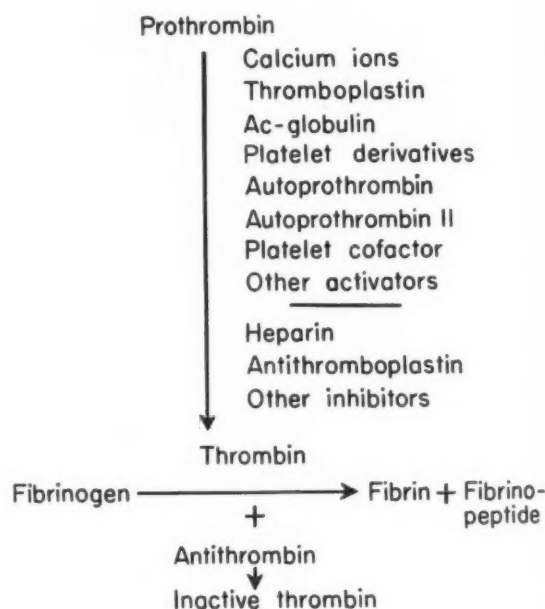


Fig. 1.

2. Prothrombin activation may be inhibited. This may occur in terms of agents that remove calcium ions, antithrombin, antithromboplastin which can neutralize thromboplastin and perhaps other activators, heparin and its cofactor, and other inhibitors.

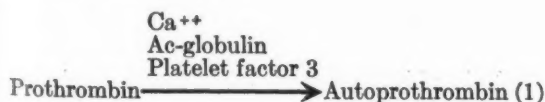
3. Fibrinogen activates itself with thrombin. This produces the fibrin clot which is seen. There are by-products of this chemical reaction and with the aid of platelet derivatives and a plasma factor, the clot eventually retracts and serum is expressed.

4. Thrombin activity is neutralized. Apparently, this occurs mostly on the basis of interaction with antithrombin, although a certain amount is also neutralized by adsorption on fibrin. Thrombin activity may be interfered with by heparin and its plasma cofactor.

## Activation of Prothrombin

It appears that it was generally believed that the activation of prothrombin consisted only of its transformation to thrombin. This idea is now inadequate, for it is known that *prothrombin can undergo multiple transformations*. Prothrombin gives rise to autoprothrombin, an accelerator that functions with thromboplastin, and to autoprothrombin II, an accelerator which functions with the platelets. Before considering the transformation of prothrombin to these derivatives, we may look at the meaning of the word prothrombin. For about seventy years, the word had reference to a hypothetical substance in plasma which somehow was supposed to contribute to a chemical mechanism that clotted fibrinogen. This hypothetical substance has now been purified and is known to have a molecular weight of 62,700, is composed of at least eighteen amino acids, contains glucosamine and a polysaccharide in which the repeating unit is glucose. When a preparation of purified prothrombin is placed in a 25 per cent sodium citrate solution, thrombin activity develops. That means that the solution acquires the minimum properties of thrombin; namely, the property of activating fibrinogen. Thus, prothrombin is a molecular entity that can by itself transform to thrombin in certain concentrated salt solutions.

The activation of prothrombin to yield autoprothrombin requires calcium ions, Ac-globulin and platelet factor 3. This combination of activators contains two that are ordinarily found in the plasma, and a third one found in the platelet compartment which is anatomically separated from the plasma. To the extent that platelets might disintegrate and have the elements of their composition appear in plasma, the latter could have all of the requirements for the transformation of prothrombin to autoprothrombin. Although autoprothrombin is derived from prothrombin, it does not become thrombin, but instead is functional in the activation of other prothrombin molecules to thrombin, and it does so in terms of functioning with thromboplastin. The equation for the development of autoprothrombin activity may be written as follows:



Prothrombin can also be transformed to autoprothrombin II, a reaction which occurs with

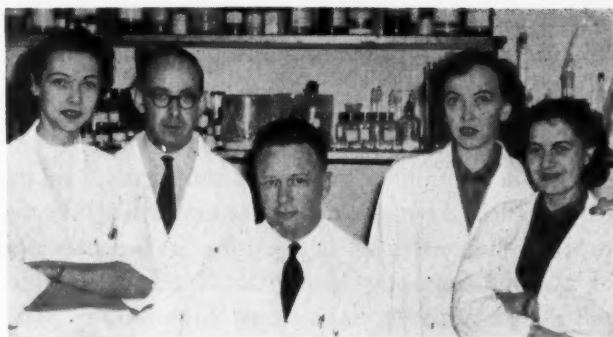
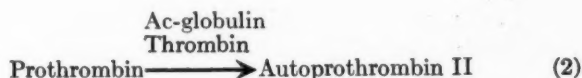


Fig. 2. Research work on the chemical nature of the blood clotting mechanisms has been pursued intensely in the Department of Physiology and Pharmacology for the past ten years. More than 100 technical papers have been published and outstanding scholars from foreign countries have come to help with the work. The above photograph represents the research group in 1954. From left to right: Shirley A. Johnson, research associate and graduate of the University of Toronto; Erwin Deutsch, Department of Medicine, University of Vienna; Walter H. Seegers, professor; Norma Alkjaersig, research associate and a graduate of the Polytechnic Institute, Denmark; and, Nevinka Ivanovic, faculty of School of Dentistry, University of Chile.

small amounts of Ac-globulin and thrombin. Like autoprothrombin, this derivative of prothrombin also does not become thrombin but functions in the activation of prothrombin. However, instead of being a cofactor of thromboplastin, it is a cofactor of platelets, and more particularly a cofactor of platelet factor 3. An equation for the formation of autoprothrombin II activity is the following.



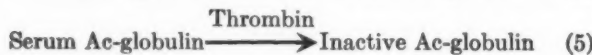
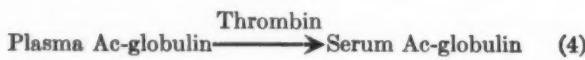
The transformation of prothrombin to thrombin may occur in a large number of ways. Some of the combinations of materials that can be used in the laboratory are outlined by means of Table I. To have a successful combination, it must have certain essentials or the equivalent. These essentials are calcium ions, thromboplastin and Ac-globulin. These substances, or their equivalent, are found in three anatomic sites; namely, the plasma, the fixed tissues, and the platelets. Any two of these sources can be used for obtaining the essential biochemical preparations, but no single compartment alone contains them. If thromboplastin from the tissues is not available, a substitute can be found in the combination of platelet factor 3 and platelet cofactor I. The latter is found in plasma. The combination of platelet factor 3 and platelet cofactor I is called threone activity,

# BLOOD CLOTTING—SEEGERS

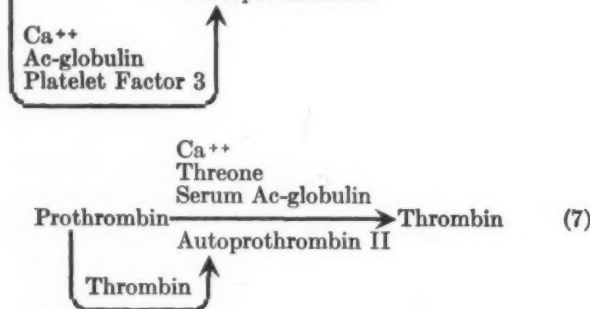
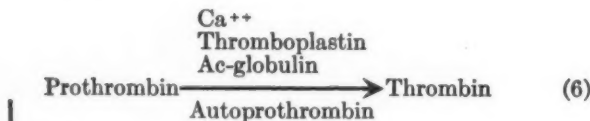
which distinguishes it from tissue thromboplastin. The equation representing threone is as follows:

$$\text{Platelet Cofactor I} + \text{Platelet Factor 3} = \text{Threone} \quad (3)$$

Plasma contains a protein found in trace quantities called Ac-globulin. This important plasma protein changes to an active form in the presence of a small amount of thrombin. Not only is plasma Ac-globulin activated, but thrombin, in sufficient quantity and in due course inactivates Ac-globulin. As a consequence of these changes in Ac-globulin, the serum of many species does not contain this activity. This function of thrombin may be represented as follows:



Of the several ways to activate prothrombin, two are perhaps most important when considered in terms their placed in a sequence of events and in terms of the quantity of prothrombin transformed. Those two ways are represented by equations.



In the first equation prothrombin becomes activated by means of thromboplastin, and Ac-globulin. A derivative of prothrombin, autoprothrombin, is an accelerator of the interactions. The type of Ac-globulin required in this equation is not specified for it may be serum Ac-globulin, platelet accelerator and perhaps plasma Ac-globulin itself may function directly with thromboplastin. The second equation represents activation with threone which is the equivalent of thromboplastin and in this instance serum Ac-globulin is required. The accelerator which is here effective is another deri-

TABLE I. MINIMUM REQUIREMENTS FOR RAPID ACTIVATION OF PURIFIED PROTHROMBIN

Activators	Source	Combinations for Rapid Activation				
Calcium ions	Plasma	+	+	+	+	+
Thromboplastin	Tissues	+	+	+	+	+
Ac-globulin <sup>1</sup>	Plasma	+	+	+	+	+
Platelet accelerators <sup>2</sup>	Platelets		+			
Platelet factor 3 <sup>3</sup>	Platelets			+	+	+
Platelet cofactor I <sup>4</sup>	Plasma			+		
Autoprothrombin II <sup>5</sup>	Plasma				+	

<sup>1</sup>Also called: proaccelarin (Owren); factor V (Owren); labile factor (Quick); prothrombin accelerator (Fantl); plasmatic cofactor of thromboplastin (Honorato); prothrombin A (Quick); prothrombinogenase (Owren); pro-prothrombinogenase (Owren); thrombogene (Nolf); plasma prothrombin conversion factor (Stefanini).

<sup>2</sup>Also called: Platelet-AcG (Ware-Fahey-Seegers); and citin (Marx).

<sup>3</sup>Also called: thrombozytenfaktor 4 (Baserga); Plättchenfaktor der Thrombokinasen (Jürgens); thromboplastinogenase (Quick-Stefanini); thromboplastin cell component (Shinowara).

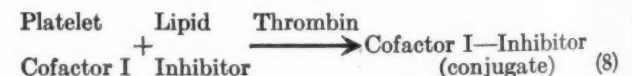
<sup>4</sup>Also called: antihemophilic globulin (Patek-Taylor); factor VII (Koller); antihemophilic factor (Brinkhous); antihemophilic globulin A (Cramer); plasma thromboplastic factor (Ratnoff); plasma thromboplastic factor A (Aggeler); platelet cofactor I (Johnson-Seegers); thromboplastinogen (Quick); thrombocytolysin (Brinkhous); thromboplastic plasma component (Shinowara); facteur antihémophilique A (Soulier); prothrombokinasen (Feissly); plasmokinase (Laki); thrombokatalysin (Lenggenhager); antihemophilic factor (vanCreveld-Mastenbroek).

<sup>5</sup>Also called plasma thromboplastin component (Aggeler); factor IX (Koller); Christmas factor (Biggs-MacFarlane); platelet cofactor II (Johnson-Seegers); antihemophilic globulin B (Cramer); plasma thromboplastic factor B (Aggeler); plasma factor X (Shulman); facteur antihémophilique B (Soulier); plasma thromboplastic factor C (Aggeler).

vative of prothrombin, autoprothrombin II. The latter is not effective under the conditions of equation 6 and contrariwise autoprothrombin is not effective under the conditions of equation 7. In equation 6, platelet factor 3 is considered to function in the formation of a prothrombin derivative; and in equation 7 in the transformation of prothrombin to thrombin.

## Inhibition of Prothrombin

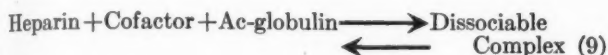
Mention has already been made of our meager knowledge of the inhibition of prothrombin activation. Consequently, only a restricted viewpoint can be developed. We can record that platelet cofactor I becomes inactivated during the clotting of blood. It very likely becomes conjugated with an inhibitor. Calcium ions and a small amount of thrombin facilitate this conjugation. There may be an unknown enzyme required for this purpose too, but until one is identified the equation may be represented as follows:



It is also known that thromboplastin combines with an inhibitor in the presence of calcium ions.

When the activation of prothrombin is inhibited with heparin, a cofactor, found in plasma, is re-

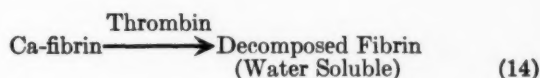
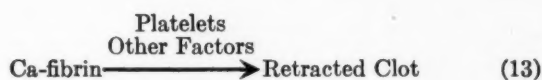
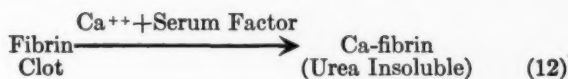
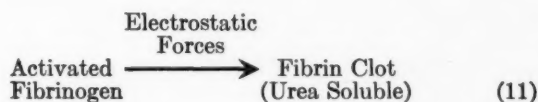
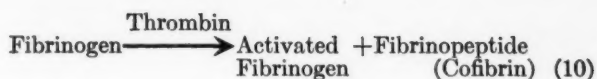
quired; for, heparin alone is not sufficient to block the activation. Prothrombin escapes alteration by these mechanisms. The inhibition can be overcome by two mechanisms; namely, (a) removal of heparin with protamine, (b) excess Ac-globulin, or (c) excess thromboplastin. It seems likely that a complex forms which consists of the following:



This dissociable complex applies to equation 1 above. Whether it also applies to equation 2 is not known. Nor is there any information as to whether it may inhibit the formation of autoprothrombin or the formation of autoprothrombin II. These would all seem to be fruitful questions for further investigation. Heparin itself is destroyed by heparinase.

#### Activation of Fibrinogen

Thrombin may be regarded as an hydrolytic enzyme for which fibrinogen may be the substrate. The large long fibrinogen molecule loses a small quantity of its structure in the form of a polypeptide(s) which has been termed cofibrin and also fibrinopeptide. The activated fibrinogen polymerizes with its neighbor activated fibrinogen to yield large polymers in which the activated fibrinogen molecules are aligned in strands, end to end and with overlapping. Several such large strands associate side by side and with branching. The fibrin which forms in this manner is urea soluble whereas the fibrin form a normal clot is not urea soluble. Further investigations of the solubility characteristics of the fibrin clot obtained under physiological conditions as compared with fibrin obtained in the laboratory disclosed that calcium ions and a serum factor are concerned with the properties of the fibrin clot. Clots also retract and for that function platelets and a protein of the plasma are important. Finally, under artificial conditions one can demonstrate that the fibrin polymer may dissolve in the presence of a large amount of thrombin. However, the latter reaction perhaps seldom occurs for antithrombin destroys thrombin so rapidly that it has no chance to contribute to the resolution of the clot. The equations representing these ideas may be given as follows:



#### Antithrombin Mechanisms

Normally the prothrombin concentration of plasma is about 300 units per ml., and this means that the plasma prothrombin can give rise to 300 times as much thrombin as is required to clot 1 ml. of a standardized fibrinogen solution in fifteen seconds. Nevertheless, one finds in a short while after blood has clotted, that only a small percentage of this thrombin can be found. To account for this loss of thrombin, four antithrombin effects may be considered; namely, antithrombin-I, II, III and IV.

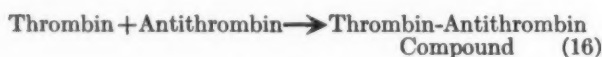
Antithrombin-I refers to the physical chemical adsorption of thrombin or fibrin. In laboratory demonstrations of this mechanism, it is possible to adsorb large amounts of thrombin. Furthermore, the quantitative data fulfill the requirements expected of adsorption phenomena, and the thrombin can be recovered from the fibrin. During the normal clotting of blood, however, only a very small amount of thrombin is involved with these mechanisms; for scarcely none can be obtained from the fibrin.

Antithrombin-II mechanisms are concerned with heparin and a cofactor found in plasma and serum. When heparin is added to plasma in suitable concentration, fibrogen does not activate itself with thrombin and fibrin clots may not form. Heparin alone, or the cofactor alone do not interfere with this process, but together they are powerful inhibitors; and Ac-globulin is antagonistic to the inhibition phenomena. Thrombin itself, considered as a molecular entity, apparently does not

change by means of antithrombin-II mechanisms. These ideas are expressed by the following equation:



The antithrombin-III mechanisms are concerned with the neutralization or inactivation of thrombin activity. Probably there is a direct combination between the plasma antithrombin factor and thrombin itself; for, thrombin and antithrombin activity disappear simultaneously. The equation may be represented as follows:



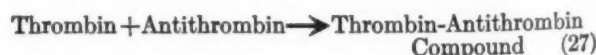
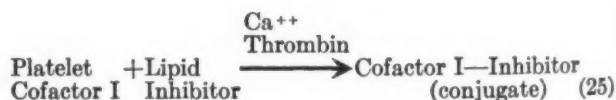
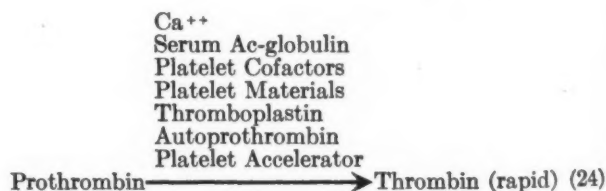
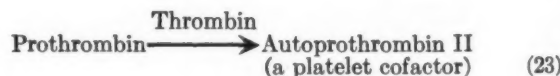
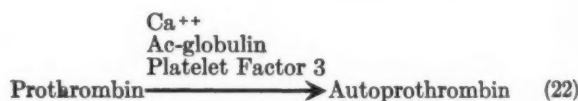
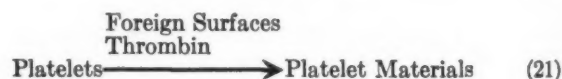
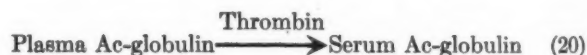
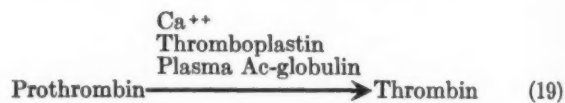
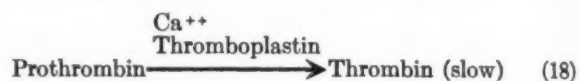
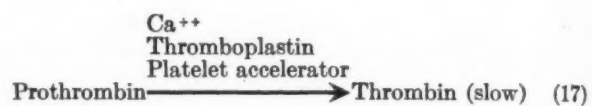
This mechanism can account for a large quantity of thrombin, being able to neutralize two or three times the potential thrombin which can be obtained from the plasma prothrombin sources. It is also a matter of interest that the antithrombin which operates in these mechanisms is very likely the same chemical substance which functions with heparin in the antithrombin-II reactions; that is, heparin cofactor and antithrombin are most likely one. But in the antithrombin-II reaction, as described immediately above by equation, heparin is not necessary and contrariwise may actually inhibit the formation of thrombin-antithrombin compound—at least to a certain extent.

Antithrombin-IV activity is closely related to prothrombin activation. It has not been established whether or not this antithrombin effect represents a distinct chemical entity or not. It represents the activity which can be demonstrated in plasma or serum after ether extraction has largely destroyed antithrombin-III. The concept of antithrombin-IV accounts for the more rapid disappearance of thrombin during the clotting of blood as compared with the rate of thrombin disappearance when the latter is prepared in the laboratory and added to plasma. It may be that the effects observed in antithrombin-IV studies can to a certain extent be accounted for on the basis of prothrombin being converted to non-thrombin derivatives of prothrombin.

#### Sequence of Events

A theoretical consideration of the important chemical mechanisms involved in blood coagulation would be incomplete without an attempt to

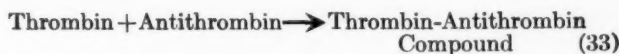
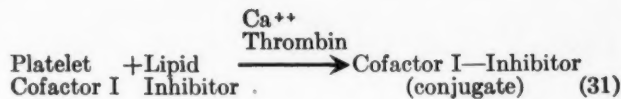
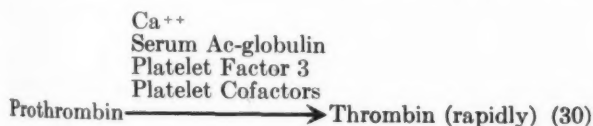
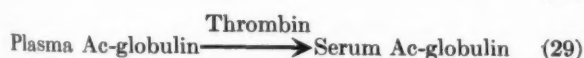
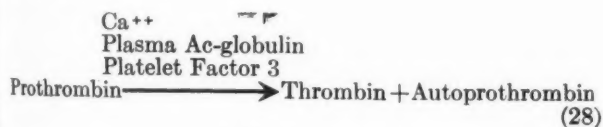
outline a sequence of events. It was usually believed that thromboplastin is supplied from the transected cells adjoining the surface of a wound. It mixes with the blood as it flows over the surface of the wound and contact of the platelets with the tissue surface is followed by their breaking up and a series of chemical reactions follow. My concepts are in accord with these time-honored views. The following equations may be used to visualize a sequence of events, which is never without simultaneous occurrences, whereby extravascular clotting occurs:



It is possible to draw blood from a vein so carefully that no thromboplastin becomes mixed with

# BLOOD CLOTTING—SEEGERS

it. Nevertheless this blood also clots, and we must consider the initiation of a series of chemical events without thromboplastin. If such occurrences are possible then we must admit that intravascular blood coagulation is possible without trauma or other means whereby thromboplastin gains entrance to the vascular spaces. Our attention immediately focuses on the platelets, for if they are also removed from the plasma, as for example by centrifugation in siliconed glassware, the clotting mechanisms remain more or less static. The main question to take into consideration would be the mechanisms whereby we can get the first small amounts of platelet materials. Here I have nothing to offer beyond pure speculation along the lines of electrostatic phenomena, rough blood vessel walls, platelet agglutination, et cetera, and I shall go directly to a consideration of what might happen *without* thromboplastin of tissue origin *if* we have platelet materials. I think the most critical need is a means for converting plasma Ac-globulin to serum Ac-globulin with thrombin, and this thrombin may arise when prothrombin, platelet factor 3, plasma Ac-globulin and calcium ions yield autoproteithrombin and a small amount of thrombin. Then, a whole series of reactions can be given in the following sequence of events wherein there are also simultaneous occurrences:



By assuming that platelet materials can become available, we can thus account for the formation of intravascular clots without the intervention of thromboplastin of tissue origin. It is of course conceivable that thromboplastin itself can gain access to the blood vessels and contribute to thrombosing tendencies. This could occur following trauma or lesions of the blood vessels or by mechanisms that have not been described. Extensive laboratory information to support the view that prothrombin may be activated in many different ways, opens the possibility for other mechanisms to operate within the blood vessels themselves. It may be that such substances as lipid materials, trypsin, or some enzymes, of which we are not aware, may eventually be found to play a role.

One of the encouraging facts is the health significance of the rapidly growing knowledge of the blood clotting mechanisms. If this accelerated progress continues, we can reasonably expect to be able to deal far more effectively with the hemorrhagic diseases and thrombosing tendencies than formerly. The main impedance to the continuous flow of much needed new knowledge seems to be the energy required to do the research. To understand this intricate pattern of protein, fat, and ionic interactions is now in the realm of possibility. We now see before us specific chemical and metabolic problems that can be worked out.

## GRANT FOR VIRUS RESEARCH

The National Foundation for Infantile Paralysis has announced a grant of \$286,944 in March of Dimes funds for virus research at the University of Michigan. Foundation Head Basil O'Connor said the Michigan grant would support "somewhat hopeful" studies toward a drug preventive for polio and the seemingly

"outsider chance" that a drug may be found to treat the disease.

The grant was among thirty-five, for a total of \$1,943,887 announced for virus research, improved respirator center procedures and treatment of polio after-effects.—*United Press Release*, Feb. 17, 1956.

# The Value of Hormone Therapy in the Rheumatic Diseases

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THE anti-inflammatory hormones, corticotropin (ACTH), cortisone and hydrocortisone have been available for clinical study for about six years, and the newer steroids, prednisone and prednisolone, for over one year. The effectiveness of these agents in the management of the rheumatic diseases has been carefully studied, and it is now possible to consider in detail the manifestations of these diseases which are affected beneficially, those which are not influenced, and the dangers associated with this form of therapy. This subject will be discussed briefly, using these facts to arrive at an appraisal of the clinical value of hormone therapy of these diseases.

## Rheumatoid Arthritis

*Statement of Problem.*—Within a short time of the discovery of the effect of cortisone on rheumatoid arthritis it became apparent that the hormone did not terminate the activity of the disease process inasmuch as inflammation usually returned as soon as the drug was stopped or the dose was sufficiently lowered. Hormone therapy would still be of great value if maintenance doses could control all of the manifestations of the disease as long as the drug was administered. Unfortunately, as will be discussed, it does not.

In general, there are three types of problems in the therapy of rheumatoid arthritis. First is the relief of pain and discomfort. Pain due to active inflammations of sensitive tissues can be ameliorated by anti-inflammatory agents, whereas pain due to the contact of irregular, distorted joint surfaces can be improved only by rest, analgesics and diminished weight-bearing. The second main objective of prolonged therapy is the prevention of the deformities which frequently develop in this disease, due in part to muscular and ligamentous contractures, and in part to cartilage and bone destruction. Physical measures are of considerable

value in preventing or relieving the soft tissue changes, but we must look to pharmacologic agents to influence the progression of the bone and cartilage destruction. The third objective of treatment of rheumatoid arthritis is to increase functional capacity. Incapacity due to inflammatory changes and pain should be helped by drug therapy, but it is unlikely that such treatment can influence disability due to prior destructive changes or soft-tissue contractures. Physical and orthopedic measures can be of great benefit to patients with this type of disability but are not the subject of the present article.

*What Hormone Therapy Can Accomplish.*—Suppression of inflammation is the main effect of these hormones, which are the most powerful antiphlogistics at present available. The objective manifestations of joint inflammation, such as tenderness, swelling, redness and warmth of articular structures, usually improve dramatically within a few days of starting adequate doses of any of these hormones.<sup>1-3</sup> Pain is usually relieved rapidly. Synovial thickening and joint effusions subside. Biopsies of synovial membrane demonstrate histologically the improvement which can be appreciated clinically.<sup>1,3</sup> The "acute phase reactants," including the sedimentation rate, C-reactive protein and mucoprotein determinations, reflect the suppression of the inflammation. Systemic manifestations of the inflammatory process, such as malaise, anorexia, weight loss and fever, also improve. In many cases, unfortunately, these effects are incomplete or inadequate in doses which are safe enough for prolonged use, and in other patients a gradual return of symptoms occurs despite continuance of hormone therapy.

Another result of the suppression of inflammation is relief of the spasm of muscles about inflamed joints which is characteristic of acute rheumatoid arthritis. Considerable disability and even deformity may be due to these muscle changes, which can lead to atrophy or contracture. These changes may be avoided by the use of potent anti-

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inflammatory agents such as the steroid hormones, especially when the relief they afford allows the patient to cooperate with an appropriate plan of physical therapy.

Other manifestations of rheumatoid arthritis which may be beneficially affected by hormone therapy include an acute hemolytic anemia which is occasionally present and the ocular pathology which may be associated with this disease.

#### *What Hormone Therapy Cannot Accomplish.*

—Several observations made during long-term cortisone therapy of rheumatoid arthritis suggest that the basic disease process does not seem to be influenced by hormone therapy in doses which are practical for long-term administration.<sup>2,5,9</sup> First, new joints can become involved by the disease while the patient is receiving apparently adequate doses of steroid.<sup>2</sup> Second is the appearance of subcutaneous nodules during therapy. These lesions consist of necrotizing granulomas, which are the pathologic lesions characteristic of rheumatoid arthritis; these lesions have been found in synovial membrane, in fibrous tissue filling defects in cartilage and bone of involved joints, in the pericardium, myocardium, aorta, lungs, pleura, dura, skeletal muscles, and in the walls of arteries. During early studies of the effect of steroids it was felt that subcutaneous nodules resolved more rapidly or stopped increasing during steroid therapy.<sup>1</sup> Further observation has revealed that these nodules can persist unchanged or, more significantly, can appear during steroid therapy, indicating that a basic pathological process is continuing. This observation has been made in patients receiving long-term cortisone therapy<sup>2</sup> and more recently during prednisone therapy.<sup>4</sup> Finally, destruction of cartilage and bone in involved joints has been observed to progress in patients clinically doing well on hormone therapy. These observations were first made in patients treated with cortisone,<sup>2,5</sup> and the same observations have now been made in a series of patients with rheumatoid arthritis being treated with prednisone and prednisolone.<sup>6</sup> The occurrence of these phenomena indicates that the basic disease process is continuing despite therapy. A cooperative British study<sup>9</sup> found no significant difference between aspirin- and cortisone-treated patients with early rheumatoid arthritis after a period of two years of therapy, lending further support to the concept that hormone therapy does not significantly alter the basic disease process.

*Dangers of Hormone Therapy.*—The side effects of the anti-inflammatory hormones are too well known to warrant detailed discussion, but it is important to stress those toxic effects which occur most frequently during hormone therapy of patients with rheumatoid arthritis.

The administration of cortisone or prednisone results in a suppression of the output of corticotropin by the pituitary with resultant adrenal atrophy. Adrenal insufficiency may then occur if a stress situation arises and additional exogenous corticoid is not given to the patient. Episodes of adrenal insufficiency have been reported as long as six months after the cessation of cortisone therapy and deaths have occurred on this basis.<sup>1</sup>

Peptic ulcers have been noted to appear within a few weeks of therapy in patients with previously negative gastro-intestinal x-rays,<sup>7</sup> and there appears to be a definite association between the appearance of peptic ulcers and hormone therapy, despite the fact that peptic ulcers did seem to occur with increased frequency in patients with rheumatoid arthritis before steroid therapy was available. In addition, the clinical manifestations of the ulcer may be modified by these drugs and in a number of cases the first indication of the ulcer has been a sudden perforation or hemorrhage.

Mental changes may also occur during therapy with any of these agents, and serious psychoses may result. Aggravation of the negative nitrogen balance frequently present in patients with rheumatoid arthritis occurs during therapy with all of these agents, and resulting osteoporosis occasionally leads to compression fractures of vertebrae. Diminished carbohydrate tolerance has also been observed with all of the anti-inflammatory hormones,<sup>1,7</sup> but it is rarely necessary to discontinue therapy for this reason. Salt and water retention and potassium loss occur with corticotropin, cortisone and hydrocortisone and may give rise to clinical problems, especially in patients with heart failure. These electrolyte changes do not occur with therapeutic doses of prednisone and prednisolone.<sup>3</sup>

The reported incidence of side effects from prolonged therapy varies from 20 to 100 per cent, depending on the dosage used. Several observers have stressed that the incidence of side effects when the daily dose of cortisone is 75 mg. or more is three times as great as it is in patients taking less than 75 mg. per day.<sup>1</sup> Termination of hormone therapy because of serious toxicity has been

necessary in approximately 10% of patients during prolonged therapy.<sup>1</sup>

In addition to these toxic effects there is suggestive evidence that prolonged hormone therapy adversely affects the mesenchymal tissues, giving rise to an illness resembling lupus erythematosus when withdrawal is attempted.<sup>8</sup> The exact significance of these observations remains to be established.

*Use of Hormone Therapy in Rheumatoid Arthritis.*—It becomes possible to arrive at a rational program for the use of these drugs in rheumatoid arthritis when all of the above facts are taken into consideration. To recapitulate briefly this includes: (1) the beneficial effects—primarily the suppression of inflammation, (2) the fact that therapy must be continuous since these agents do not induce a remission, (3) the fact that the progression of the basic disease process is not arrested, and (4) the risk of side effects especially with prolonged administration of hormones. It must be added that hormones should not be used without a careful consideration of possible contraindications. In addition, such therapy should never be started unless simpler, less dangerous measures have been tried without success and the hormones should be used in the smallest possible doses. In view of the limitations of the effectiveness of these agents, the risk of toxicity is worth taking only in specific instances in which the possible gain outweighs the risk. A few examples of such instances would be: First, patients who are in great distress because of reversible joint inflammation who have not responded to less toxic measures. Relief of pain in such a patient may be worth the risk of toxicity, or a rapid increase in functional capacity may be necessary for financial or emotional reasons. Secondly, patients who can benefit from carefully-planned physiotherapy, but who require the temporary use of a potent anti-inflammatory agent to facilitate the physiotherapy. Thirdly, patients with severe systemic manifestations of the illness, such as high fever, malaise, weight loss, a pronounced hemolytic anemia, or severe ocular lesions. Intra-articular hydrocortisone or prednisolone are very effective adjuvant measures without any risk of systemic toxicity, but are of value only in patients with involvement of few joints who will accept repeated injections.

*Prolonged oral or parenteral administration of hormones should be restricted to patients with*

*rheumatoid arthritis in whom a satisfactory response can be attained with a dosage low enough to be relatively safe.*

### Systemic Lupus Erythematosus

*Statement of Problem.*—Systemic lupus erythematosus is frequently diagnosed during a period of acute illness characterized by high fever and general toxicity, with one or more of the visceral manifestations of the disease. If the patient survives this acute toxic episode, the disease may be quiescent for long periods, there may be further acute toxic episodes or secondary infections, or the basic process may progress in one or more of the viscera affected by the disease. Involvement of the kidneys is particularly notable and progressive renal disease with hypertension and azotemia is becoming more and more common as the final manifestation of systemic lupus. Therapy, therefore, is concerned partly with the control of these acute toxic episodes and partly with management of the visceral involvement.

*What Hormone Therapy Can Do.*—The acute toxic episodes of activity of the lupus can be controlled by hormone therapy. Since these episodes can be fatal if not controlled, the risk of side effects of therapy is certainly worth taking, even when extremely large doses of hormones are needed. Fortunately, this disease is characterized by wide fluctuations in severity and it is usually possible to reduce the dose within a short time. Occasionally large maintenance doses are needed to control these manifestations of the disease, but it is necessary to accept the risk of serious side effects of the hormones in this situation. In addition to the systemic toxic effects of the disease which are well controlled by hormones, many of the individual visceral manifestations are benefited; examples include the skin and mucous membrane lesions, joint pains and objective joint findings, pulmonary and pleural changes, pericarditis and peritonitis. The hematologic changes observed in many cases of lupus, including leukopenia, hemolytic anemia and thrombocytopenia, frequently respond satisfactorily to hormone therapy.<sup>10,11</sup>

*What Hormone Therapy Cannot Do.*—Several of the visceral manifestations of systemic lupus erythematosus respond poorly, if at all, to hormone therapy. The most important of these is the kidney involvement. Improvement in proteinuria,

hematuria or azotemia during therapy has been observed in some patients, but this usually correlates with improvement in such extra-renal factors as fever and dehydration.<sup>10,11</sup> Although there have been some reports of diminution in proteinuria and increase of renal excretory capacity with cortisone therapy,<sup>10</sup> this has not been the usual experience and a careful study of daily protein excretion and clinical renal function tests during prednisone and prednisolone therapy failed to show any benefit in patients who were not febrile or dehydrated at the start of therapy.<sup>11</sup>

Other visceral manifestations of lupus which do not usually respond satisfactorily to hormone therapy are the cardiovascular and central nervous system changes. Although pericarditis and myocarditis do occasionally seem to respond to therapy,<sup>10</sup> more often they do not.<sup>10,11</sup> Cardiomegaly and electrocardiographic changes seem to be particularly resistant to therapy.<sup>11</sup> Sodium and water retention induced by corticotropin or cortisone can aggravate the clinical situation in patients with a tendency to fluid retention due to cardiac or renal disease.

While convulsions and psychoses may occur as a result of the central nervous system involvement by lupus erythematosus, they may also result from hormone toxicity. In some patients in whom these serious manifestations of the disease have appeared before hormone therapy was begun, improvement has been noted with this form of treatment; in other patients the CNS changes have appeared or become worse during therapy. Certainly the effectiveness of these agents in controlling the CNS manifestations of lupus is far less satisfactory than their effectiveness in controlling the acute toxic manifestations of the disease, and occasionally the clinical situation can be made worse by their use.

The protein abnormalities noted in the serum of patients with lupus erythematosus also fail to respond to hormone therapy. The frequently present hypoalbuminemia usually improves slightly, but does not return to normal levels; the increase of the serum globulin is corrected more often. The elevation of the sedimentation rate is usually incompletely corrected, although the C-reactive protein almost always disappears under the influence of corticoid therapy. The false-positive serological tests for syphilis are not altered and, perhaps most important of all, the LE phenomenon is not abolished by hormone therapy.<sup>10,11</sup>

*Dangers of Hormone Therapy.*—All side effects of these drugs which have been discussed in connection with rheumatoid arthritis may occur in patients with lupus erythematosus. In addition, as has been mentioned, there is greater danger from fluid retention during the administration of those hormones which cause diminished sodium excretion in patients with lupus involvement of the heart or kidneys.<sup>11</sup> The central nervous system toxicity of these agents also can be an extremely perplexing problem in patients with this disease.

*Use of Hormone Therapy in Lupus Erythematosus.*—In patients with life-threatening febrile toxic exacerbations of this disease, these hormones can be life saving and the risk of the side effects of even very large doses is certainly worth taking. The dose should be kept as low as the safety and comfort of the patient will allow with constant awareness that the activity of the disease and consequent need for hormones fluctuates frequently. Visceral manifestations of the disease should be treated cautiously in an attempt to avoid those side effects of the drug which can aggravate the clinical situation. If large doses of these drugs do not show evidence of benefiting the patient within a reasonable trial period, it is best to lower the dosage as much as possible to avoid these side effects. The evidence is reasonably conclusive that the renal lesions of systemic lupus erythematosus are not improved by hormone therapy and here the risk of toxicity outweighs the possibility of benefit. Prednisone and prednisolone seem to have advantages over the older hormones in the management of some patients with lupus erythematosus because of the lack of sodium and water retention in therapeutic doses.<sup>11</sup>

### Rheumatic Fever

*Statement of Problem.*—The arthritis of rheumatic fever is a benign process which responds readily to salicylate therapy. Rheumatic heart disease results from attacks of inflammation in the heart valves and myocardium which lead to fibrosis and scarring and this is the real problem in this disease. It seems reasonable to believe that effective suppression of the inflammatory process, begun sufficiently early and continued for a sufficient time in a self-limited attack, will diminish the resulting fibrosis. The subcutaneous nodules which occur in rheumatic fever have pathological changes which resemble the cardiac lesions and it

is an interesting clinical observation that patients who develop subcutaneous nodules rarely escape significant cardiac involvement.<sup>12</sup> In contrast to the lack of influence of hormone therapy on the subcutaneous nodules of rheumatoid arthritis, Massell<sup>12</sup> has noted that the subcutaneous nodules of rheumatic fever recede faster and no new nodules appear once hormone therapy is begun. This observation and the fact that steroids inhibit proliferation of fibroblasts experimentally suggest that hormones may minimize the myocardial and valvular fibrosis resulting from rheumatic fever.

*Effect of Hormones on Rheumatic Carditis.*—In the dosage employed in early studies the hormones were not found to have significant advantages over aspirin in the treatment of rheumatic carditis. With the use of much larger doses over longer periods of time, a series of patients studied by Massell<sup>12</sup> showed complete disappearance of murmurs twice as often as in a comparable group treated with smaller doses over shorter periods. It was also noted that the earlier treatment was begun with either schedule, the better were the results obtained.

Space limitations do not permit a more exhaustive discussion of all the controversy concerning the effect of the hormones in rheumatic carditis.

*Use of Hormones in Rheumatic Carditis.*—As a result of Massell's observations and similar reports by other investigators, it is now recommended<sup>13</sup> that large doses of hormones be used in the management of all cases of rheumatic carditis. For example, cortisone is given in a daily dose of 300 mg. for at least three weeks, after which the daily dose is gradually lowered over an additional nine-week period. Other clinicians are using the initial 300 mg. daily dose for six weeks with a minimum of nine to twelve weeks of therapy being given. Comparable doses of prednisone are being used, and these drugs seem to be preferable in those patients in whom sodium and water retention would be deleterious. Long-term follow-up of the prednisone-treated series is not yet available, however, to establish the proper dosage and to compare the toxicity of this drug to that of similarly effective doses of cortisone. In general, the side effects of hormones have not outweighed their beneficial effects in the treatment of rheumatic fever, even at these high dosages.

### Other Rheumatic or "Collagen" Diseases

The results of therapy of the other rheumatic or "collagen" diseases, such as periarteritis nodosa and scleroderma, have not been very encouraging in most instances. Systemic toxicity, fever, general well-being and joint symptoms are often improved, but in most instances the basic disease process does not seem to be affected. Some cases of periarteritis respond quite satisfactorily<sup>13</sup> and trial of large doses of hormone therapy often seems warranted. The skin changes of scleroderma occasionally show some improvement, especially in the earlier, more edematous phases.<sup>14</sup> Improvement is usually not striking, however, and visceral changes are little influenced by the hormones. In addition, because of the surprisingly frequent cardiac and renal involvement by this disease, there is often considerable danger attached to the use of sodium- and water-retaining agents. Hormone therapy of scleroderma must therefore be cautiously and not too hopefully undertaken. The skin and muscle changes of dermatomyositis often respond satisfactorily to hormone therapy, and improvement can frequently be maintained by prolonged therapy in those patients who do not have an underlying neoplasm. The improvement in the strength of seriously weakened muscles may justify accepting the risk of toxicity of relatively large doses of hormones in patients with dermatomyositis.

### Summary

Experience has shown that hormone therapy is often of great value in the various rheumatic diseases, but it is not curative, nor can it arrest the progression of the basic disease process. Its value in rheumatoid arthritis is greatest in patients with predominantly inflammatory disease, who respond satisfactorily to doses low enough to be safe for prolonged use, although larger doses may rarely be used temporarily for special indications. The fact that the basic disease process seems to progress despite hormone therapy makes it unwise to subject most patients to the risk of serious toxicity. In contrast, hormone therapy may be lifesaving in patients with other diseases of this group, most notably lupus erythematosus, and the risk of toxicity of even very large doses is well worth taking. This is true for some of the manifestations of these diseases, while others are not favorably influenced by hormones. Since the clinical situation can often be seriously aggravated by

(Continued on Page 302)

# Review of Pathophysiology and Treatment of Shock Accompanying Myocardial Infarction

By Frederick N. Talmers, M.D.,  
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**S**HOCK accompanying myocardial infarction is an acute medical emergency which occurs in approximately 10 per cent of all cases of infarction of the heart. While the total over-all mortality of acute myocardial infarction is 21 per cent, when shock occurs as a complicating factor the mortality increases to 80 per cent.<sup>1</sup> New agents introduced in recent years in the treatment of shock have reduced this mortality rate significantly. This is particularly true when treatment is instituted within the first three hours of the shock state, as was well pointed out by Griffith et al,<sup>2</sup> who showed that of 134 patients treated for shock by various means, sixty who received treatment within three hours had a mortality rate of only 13 per cent; the remaining seventy-four patients, who were similarly treated after three hours had elapsed, had a mortality rate of 76 per cent. The purpose of this paper is to discuss the important factors in the pathophysiology of shock accompanying myocardial infarction, and to review the most satisfactory methods now available in restoring myocardial function to an optimum state.

## Definition

The clinical syndrome of shock is well known to all physicians, but for purposes of this discussion, shock is considered to be present when, in a previously normotensive patient, the systolic pressure is 80 mm. Hg or below, accompanied by the signs of circulatory collapse such as cyanosis; cold, clammy, moist skin; rapid, thready pulse; and narrowed pulse pressure. In patients with pre-existing

hypertension, the clinical syndrome of shock may be present when the systolic pressure is 100 mm. Hg or even higher, depending on the degree of hypertension existing previously.

## Pathophysiology

Although numerous theories and concepts have been expounded, the precise sequence of pathophysiological events leading to shock following myocardial infarction is not clear. Loss of plasma into the infarcted muscle, or release of a histamine-like or other toxic substance liberated by traumatized or ischemic tissue does not appear to be adequate to explain the shock accompanying myocardial infarction.<sup>3,4</sup> A slight decrease in plasma volume and hemoconcentration has been observed in some patients with myocardial infarction in shock thought to be due to fluid loss into the lungs as a result of pulmonary congestion<sup>5</sup> and/or sweating or vomiting. However, in the majority of patients, the circulating blood volume is not significantly decreased and certainly not to a sufficient extent to produce a state of shock.<sup>3</sup>

There is general agreement that the actual event leading to the shock state in patients with myocardial infarction is a reduction in left ventricular output due to direct loss of functioning myocardium. In studies on patients with severe myocardial infarction, Freis et al<sup>6</sup> found a reduction of cardiac output, stroke volume, an increase in total peripheral resistance, heart rate, central venous pressure, and essentially normal pulmonary and total blood volumes. He suggested that the initial change following extensive myocardial infarction is a reduction in stroke volume, followed by the later appearance of a fluid retention syndrome which, in the presence of a defective myocardium, results in congestive heart failure as well as an accentuation of the shock-like state.

Corday et al<sup>7</sup> have shown experimentally in dogs that there is a diminution of coronary blood flow in shock. In addition, these workers have shown

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This review represents in part material presented by Dr. Talmers at a regular Medical Seminar of the Department of Medicine.

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that following "coronary artery ligation, the ischemic myocardium ceases to contract and balloons with each systole when the blood pressure is maintained at normal levels. If the blood pressure is lowered by bleeding, ballooning becomes more marked in spite of the lowered intraventricular systolic pressure, while restoring the blood pressure to normal by blood transfusion decreases the degree of ballooning and reduces the extent of the area of noncontracting myocardium. Where only partial constriction of the coronary artery was carried out, contractility of the involved myocardium remained normal as long as the blood pressure was maintained, but after the latter fell to shock levels, the involved myocardium ceased to contract and ballooning occurred. If the results of these experiments are applicable to humans, it is evident that maintenance of adequate blood pressure levels would be important in minimizing the extent of the myocardial injury. This is particularly true in the human subject with coronary artery disease where narrowing of adjacent collateral coronary arteries is practically always present, and where a barely adequate myocardial oxygen supply may be maintained even with a normal coronary perfusion pressure. Any significant fall in coronary perfusion pressure such as occurs in shock would extend the area of irreversible myocardial damage in these critical areas, and would tend to maintain and accentuate the shock state. As experimentally complete ischemia of the cardiac muscle cell for twenty-five to forty-five minutes produces irreversible myocardial damage with infarction,<sup>8</sup> emphasis need hardly be given to the necessity of immediately restoring the coronary perfusion pressure to optimum levels, if one expects to reduce significantly myocardial injury and mortality in patients with shock accompanying myocardial infarction. The same may be said for the prompt specific treatment of disturbance in cardiac rhythm, either supraventricular or ventricular tachycardia, as these arrhythmias may per se decrease coronary flow, lower the cardiac output and consequently secondarily accentuate the shock state. In the past, it has been the feeling of some physicians that hypotension associated with myocardial infarction should not be vigorously treated, as it was argued that it was a compensatory mechanism which salutarily decreased the work of the damaged heart,<sup>9</sup> and that restoration of blood pressure to normal would increase the incidence of myocardial rupture. From the previous discussion of the

pathophysiology of myocardial infarction and shock, it is evident that there is no physiological reason for such a concept. Further, since rupture secondary to myocardial infarction usually occurs between the fourth and eleventh day<sup>10</sup> at the time when tissue necrosis has occurred, and shock usually develops in the first few hours or days, this complication of restoring blood pressure to normal has probably been exaggerated.

### Treatment

In the management of the patient with shock complicating myocardial infarction, the cardinal principle in therapy is to accomplish a restoration of blood pressure as quickly as possible to levels that will provide optimum coronary blood flow, and will not at the same time excessively increase the work of the heart against pressure. The measures that are most satisfactory in accomplishing this are vasopressor agents and transfusion of blood or plasma. Adjuvant methods of treatment including oxygen, sedation, digitalis, and other general measures remain important additions in the therapy of shock, and will be discussed.

*Vasopressor Drugs.*—The introduction and use of vasopressor agents have been important adjuncts to therapy of shock. The ideal pressor drug would elevate blood pressure, maintain normal peripheral resistance, increase stroke output, produce a proportionate increase of coronary blood flow, not impair myocardial efficiency or produce serious arrhythmias. The agent which best satisfies these criteria is norepinephrine, which increases blood pressure, peripheral resistance, coronary blood flow, tends to slow the pulse and produces no significant increase in cardiac output. Unlike epinephrine, it does not produce anxiety, restlessness or apprehension. Encouraging results with its use in shock accompanying myocardial infarction have been reported, indicating a small but significant reduction in the high mortality of this condition.<sup>11-14</sup> In most of the cases reported, pulmonary edema or congestive failure was not produced or aggravated by norepinephrine, and in some cases improvement of congestive failure occurred attributable to an increase in heart contractile force.<sup>12</sup>

To administer norepinephrine (levophed bitartrate) one dilutes 4 cc. levophed in 1000 cc. 5 per cent glucose in water which yields a solution for intravenous administration containing 4 micro-

grams of norepinephrine per cubic centimeter. The rate of administration is determined by the pressor response, and frequent blood pressure determinations must be taken until the desired pressure is maintained. Increasing the concentration of the norepinephrine to 8 micrograms/cc. and even to 16 micrograms/cc. may have to be resorted to at times for the desired blood pressure response. An increase in blood pressure can usually be expected immediately, and on premature withdrawal, the fall in pressure is also rapid. In the use of norepinephrine, emphasis should be placed on the necessity of titrating the patient's blood pressure, and to continue to increase the concentration of the drug and/or the rate of administration until a satisfactory response is obtained. However, those patients who do not respond to concentrations of 16 micrograms/cc. given at the rate of 40 to 50 drops/minute usually prove to be unresponsive. Cortisone has been used in an attempt to restore vascular reactivity to norepinephrine, but with disappointing results, Griffith et al noting only a questionable result in one of twelve patients.<sup>2</sup> In patients not responding to norepinephrine, the addition of blood or plasma is indicated in an attempt to restore blood pressure to normal. After the patient is out of shock and blood pressure appears to be maintained, gradual withdrawal of the drug is indicated, checking carefully to see that blood pressure does not return to shock levels. Patients have been known to be on norepinephrine for over a week before the blood pressure could be maintained by itself, although usually withdrawal can be accomplished within twenty-four hours. Care must be taken to avoid extravasation of the fluid outside the vein as intense local reactions followed by sloughing may occur.<sup>11,15</sup> This complication has developed when infiltration has occurred in the skin of the hand and foot, but rarely in the arm.<sup>11</sup> Also, sloughing along the course of the vein after satisfactory insertion of a polyethylene tube into the saphenous vein has been reported,<sup>11</sup> and has developed in one of our patients as well. Consequently, intravenous infusions of norepinephrine in the vein of the lower extremities had probably best be avoided if veins in the arms are available.

Other vasopressor agents have been reported and used with varying success, but have received only limited use at this hospital. Mephentermine, which can be given both intravenously and intramuscularly, has been used with some success.<sup>1</sup>

Phenylephrine also has received clinical trial with varying success<sup>16</sup> and may be administered intramuscularly or intravenously in dilute solution. Other pressor drugs used which can be given both intravenously and intramuscularly include ephedrine sulfate<sup>17</sup> and paredrine.<sup>18</sup> More recently, encouraging results with metaraminol have been reported.<sup>19</sup>

Epinephrine, while used in the past for shock, has no advantage over norepinephrine and has possible disadvantages, in that it tends to cause a greater increase in cardiac output and work than norepinephrine, which might be detrimental to the patient with a damaged myocardium. Furthermore, there is experimental evidence that the myocardial epinephrine content is already high in patients with myocardial infarction<sup>20</sup> and that this increased concentration of epinephrine may be responsible for initiating the ventricular arrhythmias frequently seen in this condition, since adrenergic blocking drugs seem to be effective in treating arrhythmias in animals with experimental infarction.<sup>21</sup>

*Transfusions.*—Since the circulating blood volume is not decreased in patients with myocardial infarction in shock, the elevation of blood pressure following transfusions probably is due to increased blood volume and ventricular filling with consequently increased stroke output. Whether or not the transfusion is effective in restoring blood pressure is then fundamentally dependent on whether enough functioning myocardium remains to respond to Starling's law of the heart. In view of this, vasopressor agents appear to be a more physiological approach to the problem of shock accompanying myocardial infarction, however, blood and plasma transfusions have been used extensively with good results in some patients, particularly when given early.<sup>22</sup> The usual rate of administration has been 2 to 4 ml. per minute (average of 200 ml. per hour) with a range of 60 to 500 ml. per hour.<sup>23</sup> In the presence of anemia, blood is the treatment of choice, otherwise plasma is preferred. Before using transfusions in patients with myocardial infarction in shock, it is important to exclude the presence of pulmonary edema. Where such is present, it is usually indicative of an increase in pulmonary capillary and artery pressure secondary to an inability of the left ventricle to expel blood adequately. This alteration in pulmonary cir-

culatory dynamics contraindicates transfusion and if such were given, would likely increase the pulmonary capillary and left ventricular diastolic pressure further and might cause fatal pulmonary edema. However, in those cases in shock having mild left ventricular failure as evidenced by a few basilar râles, the judicious use of transfusion may be resorted to. The rate of administration is best controlled by a continuous recording of the venous pressure by a saline manometer connected through a three-way stopcock system to the transfusion needle, which allows for repeated and practically continuous determination of venous pressure. The transfusion of blood or plasma may usually be administered safely as long as the venous pressure remains at a constant level, but if during the infusion, it becomes elevated, the transfusion should be stopped, as a rise in pressure indicates an overload on the heart, and the production of hemodynamic failure. While in an exceptional case, large amounts of blood have been used to restore the blood pressure in a patient with myocardial infarction in shock,<sup>24</sup> in a patient showing any evidence of left ventricular failure, volumes greater than 500 cc. should be administered with caution, as amounts greater than this are usually not successful.

To avoid overloading the pulmonary circulation, intra-arterial blood transfusions have been used in shock accompanying myocardial infarction. The introduction of intra-arterial blood transfusions in the treatment of shock was based in large part on experimental work reported by Kohlstaedt and Page.<sup>25</sup> Utilizing dogs subjected to hemorrhagic hypotension, they reported superior results using intra-arterial blood transfusions as compared with the intravenous route, although the rate of administration was four times greater in the former. However, other work has shown that when the experimental conditions are comparable, including rate of replacement of blood volume, there is no superiority of the intra-arterial route over intravenous transfusion in restoring the blood pressure to normal.<sup>26-28</sup> Although some good results in shock accompanying myocardial infarction have been reported with the intra-arterial method,<sup>29,30</sup> there is no clear-cut evidence of its superiority over the intravenous route of administration, and is not recommended for routine use in treatment.

In those individuals with pulmonary edema, a bloodless phlebotomy, accomplished by the application of tourniquets to the extremities to reduce

venous return, and/or venesection removing 250 to 500 cc. of blood rapidly may be indicated, in spite of the presence of shock. This acute reduction in venous return reduces the work load on the damaged left ventricle sufficiently in some cases to decrease left ventricular diastolic and pulmonary capillary pressure with relief of pulmonary edema. At the same time, such a reduction in load may occasionally, operating through Starling's law of the heart, increase left ventricular stroke output which would tend to improve secondarily the shock state. When failure is present, it is evident that digitalis by improving myocardial contractility would further enhance left ventricular output and lower pulmonary venous pressure, and therefore should be administered.

*Digitalis.*—Objections to the use of the digitalis glycosides in patients with infarction and failure have included the possibility of enhancing the incidence of cardiac rupture, and the danger of producing ventricular fibrillation by increasing ventricular irritability.<sup>31,32</sup> The latter objection cannot be overlooked entirely, although ventricular arrhythmias usually occur with excessive rather than with therapeutic amounts of digitalis. If only minimal signs of congestive failure are evident, a mercurial diuretic such as mercurhydrin or thimerin may be all that is necessary. However, if pulmonary edema becomes progressive, then digitalization should be carried out. The usual digitalizing dose of lanatoside C, a rapidly acting digitalis glycoside whose action is dissipated in forty-eight to seventy-two hours, is 1.6 mg. and may be given slowly intravenously at one time. However, in patients with myocardial infarction and shock, we prefer to administer 0.8 mg. intravenously initially, and then give an additional 0.4 mg. via this same route in one to two hours if no effect is evident, repeating this latter dose in another one to two hours if necessary. If rapid intravenous digitalization with lanatoside C is used, then a longer acting digitalis preparation such as digitoxin or digitalis should be started within six to twelve hours, at a dosage that will accomplish complete redigitalization in the next twenty-four to forty-eight hours.

*Oxygen.*—Oxygen therapy is advisable in all patients in shock accompanying myocardial infarction, as such patients have a tissue hypoxia on the basis of a moderate reduction in arterial oxygen

saturation,<sup>33</sup> and this, combined with the diminished cardiac output, significantly reduces oxygen transport to the peripheral tissues. With high concentrations of inspired oxygen of 95 to 100 per cent, which can be delivered by a closed mask, arterial oxygen saturation will be restored to normal, and in addition approximately 2 volumes per cent of oxygen will be carried in physical solution in the plasma, instead of the usual 0.1 to 0.2 volumes per cent in physical solution present with the patient on ambient room air. This excess physically carried oxygen increases the blood-tissue gradient, and is therefore readily delivered to the hypoxic peripheral tissues existing in patients with shock. Lower inspired oxygen concentrations of 40 to 50 per cent such as can be delivered by either tent or nasopharyngeal catheter,<sup>34</sup> may replace the mask after the first few hours following satisfactory response of the shock to therapy.

#### *Agents Used in Complicating Arrhythmias.*—

Tachycardia is a serious complication of myocardial infarction which should be treated promptly as it may initiate shock or contribute to its severity. Although clinical acumen may diagnose the type of tachycardia, the precise diagnosis is made with the electrocardiogram. The differentiation between an arrhythmia of supraventricular and ventricular origin becomes of paramount importance in treatment, as the proper treatment of one may be lethal for the other. In general, patients exhibiting a persistent rapid ventricular rate of supraventricular origin should be digitalized as previously discussed in an effort to slow the tachycardia, unless other measures such as carotid sinus pressure, sedation, et cetera, promptly eradicate the arrhythmia. On the other hand, ventricular tachycardia is a contraindication to the use of digitalis. This arrhythmia is best treated by the intravenous administration of procaine amide (pronestyl) at the rate of 50 to 100 mg. per minute until the rhythm is restored to normal, which in most instances will not require more than one gram, although occasionally higher dosages may have to be given. An electrocardiogram, using a direct writing machine, should be recorded almost continuously throughout the period of administration of this drug, so that the latter can be stopped when conversion of the abnormal rhythm has occurred. An alternate method, with which we have had little experience, is the intravenous use of 0.6 gram quinidine lactate

or quinidine hydrochloride diluted in 300 cc. of 5 per cent glucose in water given over a twenty to thirty minute period, stopping this infusion when conversion of the arrhythmia has occurred. With restoration of normal rhythm, 0.5 gram pronestyl or 0.2 to 0.4 gram quinidine orally every four hours should be given to prevent recurrence.

*Anticoagulants.*—In an effort to prevent thrombotic complications, anticoagulants should be given to all patients with shock accompanying myocardial infarction unless a specific contraindication to anticoagulant therapy exists. Heparin plus a longer acting oral anticoagulant such as dicumarol is started simultaneously, the former drug being discontinued in forty-eight to seventy-two hours, when the action of dicumarol becomes manifest. Heparin is given in dosages of 50 to 75 mg. intravenously every four hours depending on the clotting time, and dicumarol is given orally in dosages of 250 mg. on the first day, 150 mg. on the second day, and 100 mg. on the third day unless the prothrombin time is unduly elevated, when a smaller dose is given. The aim of therapy is to maintain prothrombin levels between two to two and one-half times the control prothrombin time, which usually requires 50 to 100 mg. daily.

*General Measures.*—The apprehension and pain which often accompanies myocardial infarction and shock is best treated by the slow intravenous administration of 10 mg. morphine sulfate, as absorption from intramuscular or subcutaneous tissue is uneven and unpredictable during the shock state. Unless large quantities of sodium are lost through vomiting or excessive sweating, sodium is best restricted during the initial stages of treatment because of retention of this ion in patients with myocardial infarction<sup>35</sup> and shock. Total fluid loss should be estimated and replaced either by the intravenous administration of fluids, or by the oral route if the latter is feasible. In those patients exhibiting signs of pulmonary congestion and dyspnea, elevation of the foot of the bed to treat the shock is contraindicated. The best position under such circumstances is a moderate elevation of the head of the bed which will help relieve the dyspnea, and does not significantly contribute to the severity of the shock.

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Today, probably no country in the world has an accurate knowledge of its cancer incidence rate.

\* \* \*

The largest and most important problem today in research on the etiology of cancer is still the relative importance of extrinsic and intrinsic factors.

\* \* \*

In skin cancer, the main etiological factors appear to be environmental, the chief of which is solar radiation.

Using existing facts about etiology, a considerable degree of control of skin cancer can be achieved by prevention.

\* \* \*

The more the racial peculiarities of cancer as studied, the greater is the tendency for them to indicate environmental rather than hereditary causes.

\* \* \*

No visible or palpable neck tumor should be blindly treated without definite diagnosis.

# Industrial Medicine and Hygiene at Wayne University

By Arthur J. Vorwald, Ph.D., M.D.

Detroit, Michigan

FOR centuries, man has recognized that many diseases, often incurable, result directly from his various occupational pursuits. The dust of the mines, the fumes of the ore smelter, the noxious gases of combustion—all have taken their toll of a countless number of persons, largely due to man's ignorance of the causes and means for preventing occupational diseases. In modern times, the potential for occurrence of occupational diseases is vastly greater than at any period in history, yet the actual incidence of such diseases is far less in those enlightened countries benefited by advances in industrial medicine and hygiene. Highly toxic substances are daily handled in tonnage quantities, powerful x-ray and radioactive units are employed with complete safety, and useful work is carried out under conditions of extreme temperatures or pressures which in earlier times could only have been accomplished by sacrificing health, happiness and human lives.

Industrial medicine is that branch of medical practice which deals with the relationships of man to his occupation for the purpose of the prevention of disease and injury and the promotion of occupational health, productivity, and social adjustment.<sup>1</sup> Industrial hygiene is similarly concerned with the preservation and improvement of the health of the worker, but with emphasis on the occupational environment as it affects the individual. The primary difference between the two sciences is in the approach to the problem. In reality, the same ultimate objectives are being pursued by both medical and hygiene personnel. The combined skills of the physician, nurse, hygienist, engineer, chemist, and others are reducing the enormous complexity of many occupational health hazards to a simplified system which now permits true scientific classification, precise study, and the application of remedial measures. The significant achievements in occupational health,

however, do not warrant complacency either now or in the future because the ever-expanding industrial enterprise with its development of new products and consequent need for manpower constantly poses a challenge. Industrial America recognizes the challenge and has come to appreciate the direct relationship between health and efficiency, and to accept the idea that the worker's safety and health are of vital importance.

Being cognizant of that challenge, Wayne University initiated about two years ago a new Department of Industrial Medicine and Hygiene as an integral component of the College of Medicine. The department has been developed essentially to provide Detroit and the State of Michigan with a teaching and research organization which will assist in meeting the occupational health needs of our expanding industrial community. The geographical location of Wayne University constitutes an important advantage since the capable staffs and the excellent facilities of many modern industrial and technological enterprises in Detroit are available to the department in its efforts to promote optimal adjustment of the total person to the total environment.

As previously stated, industrial medicine and hygiene are concerned primarily with the preservation and promotion of the health of the industrial worker. The objectives in that regard may be achieved by a program embracing three major areas of activity, namely:

*Teaching and Training;*

*Research, Basic and Applied;*

*Service to Industry and to Community.*

## Teaching and Training

The greatest single need in the fields of industrial medicine and hygiene is for more expertly trained personnel. In common with most other disciplines of medicine and of science, a serious shortage of suitably trained specialists is very evident, and the current rate at which the demand

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for their skills is increasing makes it apparent that the educational activity of the department is one of its greatest responsibilities. It is anticipated that such activity may have the usual numerous com-

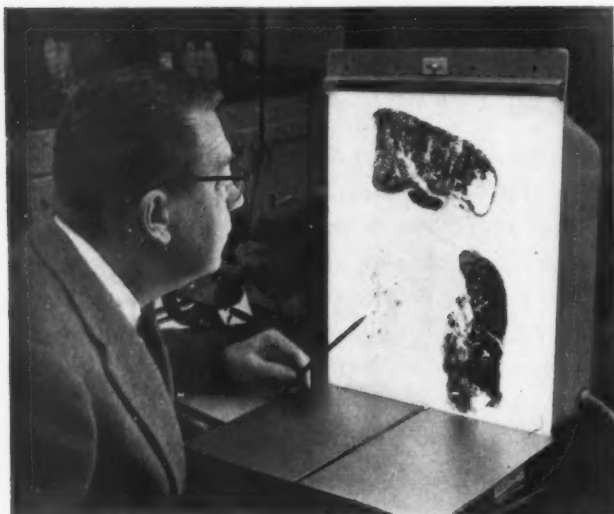


Fig. 1. Macroscopic visualization of gross sections of human lung prepared by special techniques. The section, at pointer, of a healthy lung is remarkably clean of inhaled dust and free of disease. The other two sections exhibit the advanced pigmented fibrosis of advanced silicosis. The upper section is complicated by a large tuberculous cavity.

plications of any educational endeavor. In last analysis, however, they must be overcome if the new department at Wayne University and, indeed, if the disciplines of industrial medicine and hygiene in any situation are to have a significant and positive impact upon the total health and environment of our industrial workers. In recognition of its responsibilities, the department is focusing attention on the development of curricula for teaching and training at the undergraduate, the graduate, and the post-graduate levels.

With respect to the undergraduate level, it is generally recognized that the vast areas opened up by science during the last few decades alone offer an unprecedented addition to the burdens of both student and faculty. The growing emphasis on preventive and "constructive" medicine, the increasing attention to factors affecting health and well-being which stem from patterns of life and environment, the importance of occupational health in the total economy and security of our country suggest but a few of the new ingredients of industrial medicine and hygiene that are to be added to the already overcrowded curriculum of our medical schools. There is no single answer

to the dilemma posed in the mixing of those ingredients into the overall framework of undergraduate medical education. Reasonable resolution in that regard may be achieved by adhering to the basic premise that the primary function of the department and of the Medical School as a whole is to stimulate the student to become a good and adequate physician. Woven within the framework of that function, the objectives of industrial medicine and hygiene should be to help the student to: (1) acquire requisite knowledge, (2) establish essential habits, (3) achieve basic skills, (4) develop sound attitudes, and (5) gain an understanding of professional and ethical principles of medicine.<sup>2</sup> Accordingly, the department strives to promote in the student an increased awareness of the importance of the field of industrial medicine and hygiene, to give him a rather full picture of the range of activity which characterizes that field, to stimulate his interest in considering it as one in which to specialize, to acquaint him with broad concepts. Thus, the student is progressively assisted in the ways and means of recognizing and evaluating at least certain occupational hazards and diseases, their etiology, diagnosis, and prevention.

In keeping with the above objectives, during the past year the department engaged in an interesting and instructive program for junior medical students who wish to be gainfully employed during their summer vacation. Accordingly, a number of selected students were accepted as externs by one or the other of the approved medical departments of industries in and about Detroit. The practical experience, in various aspects of industrial medicine and hygiene, gained by those students was most gratifying. Similar but more broadened programs are planned for subsequent years.

The teaching and training program for the practice of industrial medicine or hygiene is designed primarily for the student who seeks academic credit at the graduate level, after he has attained a basic degree in his specialty. The problems attending that program are complicated not only by the variety of distinct and interrelated facets of such a practice, but also because each of those facets demands a different degree of emphasis according to whether the student is a physician, hygiene engineer, chemist, or a member of other disciplines of science. It is apparent that the objectives of the graduate program may have specific reference to the acquisition of knowledge

## INDUSTRIAL MEDICINE AND HYGIENE—VORWALD

necessary for the full or part-time practice of industrial medicine and hygiene, for the attainment of recognition by the recently established

components of the graduate curricula being developed by the Department of Industrial Medicine and Hygiene at Wayne University. From the

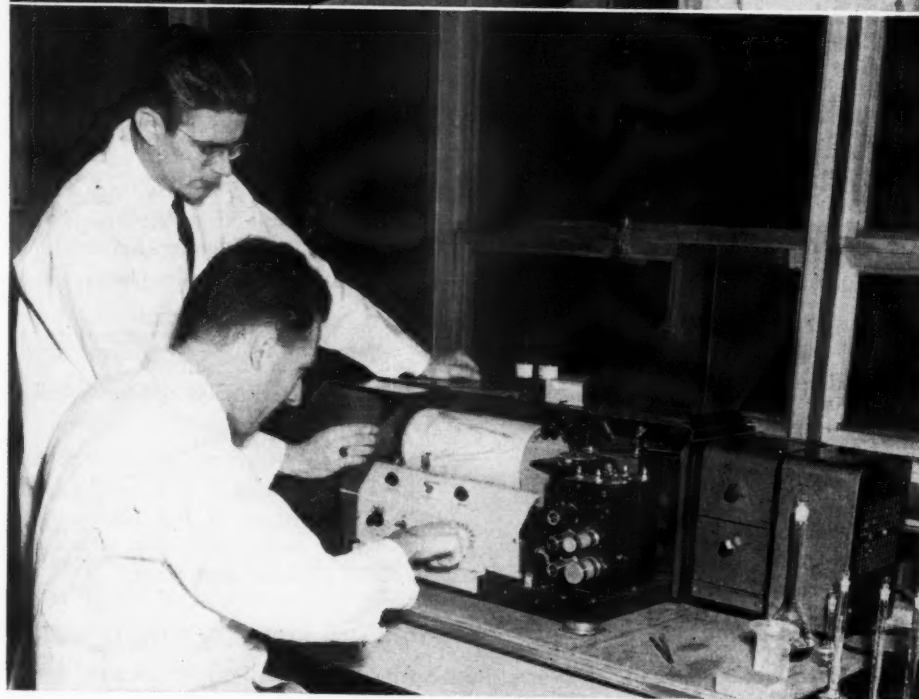


Fig. 2. (*above*) Special instruments for the collection and study of aerosols. Edward Urban, M.E., associate professor in the department, is manipulating the electrical control for the thermal precipitator, especially suitable for collecting extremely small particles of an aerosol. Depicted also are other instruments such as the impinger and the electrostatic precipitator in the foreground.

Fig. 3. (*below*) The spectrograph for analyzing various chemical substances. It is being operated by Andrew L. Reeves, M.S., under the guidance of Ralph G. Smith, Ph.D., associate professor in the department.

Board of Occupational Medicine, or to fulfill the requirements for a higher academic degree. Obviously, it is impossible at this time to detail the

medical point of view, the curriculum will follow in general the broad outline formulated at the recent Conference on the Education of Phy-



Fig. 4. Stainless steel chambers, specifically designed and constructed for the prolonged exposure of experimental animals to the inhalation of aerosols disseminated under controlled conditions.



Fig. 5. Stainless steel cages especially designed and constructed to hold monkeys under the best environmental conditions.

sicians for Industry.<sup>1</sup> That outline, although subject to revision and modification before being accepted as a standard, is presented below for the guidance of those who contemplate a course of graduate training in industrial medicine.

#### Curriculum of Graduate Education

##### A. Academic and clinical training.

1. Basic science.
  - (a) Biostatistics.
  - (b) Epidemiologic technique.
  - (c) Environmental physiology.
  - (d) Industrial hygiene.
  - (e) Applied toxicology.
  - (f) Pathology of occupational disease.
  - (g) Human engineering, including psychophysiology.
  - (h) Preventive medicine and public health.
2. Clinical.
  - (a) Diagnostic aspects of medical and surgical specialties as they relate to occupational medicine.
  - (b) Diagnosis and treatment of occupational diseases.
  - (c) Care of emergencies.
  - (d) Rehabilitation.
  - (e) Mental health.
3. Ancillary activities.
  - (a) Medical and business administration, including budgets, interdepartmental rela-

tions, layout, personnel, public relations, et cetera.

- (b) Legal aspects, including compensation law and insurance systems.
- (c) Community facilities and relations.
- (d) Health education and industrial psychology.
- (e) Engineering principles (mechanical, electrical, safety).
- (f) Industrial processes and methods.

##### B. Research projects.

##### C. Field training.

The purpose of this year is to put into practice, under supervision, that which has been learned in the previous two years.

In the interest of the hygienist, chemist, and other non-medical students, the department is designing curricula for those who elect to further their formal training in areas pertaining to occupational health. Courses dealing with all phases of industrial hygiene and the necessary basic sciences make up the academic portion of training. Seminars in current and advanced topics, together with extensive laboratory exercises complete the program. Full use will be made of courses offered by other departments of the University, and of the excellent opportunities for

practical field training available in the industries of Detroit.

Another responsibility of the Department of Industrial Medicine and Hygiene involves the area of teaching and training at the postgraduate level; that is, for those physicians and hygienists who have an interest in occupational health and, therefore, seek "refresher" or special subject reviews. Obviously, the content of such reviews must be developed and oriented according to the objectives which, from a medical point of view, may have reference to the practicing physician who is concerned only occasionally with a disease related to occupation. Or, the objectives may pertain to the physician who, because of a part or full-time industrial affiliation, has need for additional knowledge in specific areas of occupational medicine and hygiene. With respect to the latter physician, his ultimate objective in taking the reviews may be in preparation for specialty board examinations.

The composition of the postgraduate educational program and the methodology to facilitate its objectives are dependent in large measure upon the motivation and skills of both the student-physician and the teaching personnel. Other practical considerations, such as the time available for the physician who has scheduled obligations to other responsibilities, must also be taken into account. Physical facilities for the most advantageous use of lectures, laboratory exercises, case presentations, group conferences, and seminars are also important factors. The program may be concerned with the general principles and scope of occupational medicine and hygiene; it may give particular attention to certain aspects of preventive medicine as it relates to toxicology, epidemiology, biostatistics, industrial safety, and occupational disease control; it may emphasize special occupational health problems as they pertain for example to dermatitis, hearing loss due to noise, cardio-respiratory disabilities, and mental health; or, it may stress such things as pre-employment and periodic medical examinations, job placement, absenteeism, rehabilitation, sickness benefits, workman's compensation, and professional relations.

One further aspect of interest in a program concerning industrial medicine and hygiene, is the course work in special topics offered on a non-credit basis. One such course already given, dealt with audiometric techniques and was designed to provide technical know-how in that area

on a very practical basis. Other courses along similar lines are envisioned for those individuals who seek proficiency in relatively special areas of study as it may pertain to the application of instruments or procedures of timely interest in occupational health.

### Research

The field of industrial medicine and hygiene embraces many areas in need of research. Opportunities in that regard are almost limitless, not only for the medically qualified investigators, but also for members of other fields of science. The industrial hygienist, toxicologist, biochemist, physicist, engineer, physical and analytical chemists and others have joined forces with the physician to investigate the nature, prevention and therapy of occupational disease processes. History is replete with their accomplishments, as for example the recognition and prevention of the hazards attending exposure to certain dusts and fumes of lead, mercury, arsenic-bearing ores, radioactive substances, beryllium compounds and quartz. Many other similar examples could be cited here, but in relatively few instances is the problem so clearly understood that no further study has to be done. This is true even in the case of silicosis which has been familiar to medical men for many years. Although much is known about that occupational pulmonary condition, there is still an appreciable lack of knowledge concerning the precise manner in which crystalline free silica exerts its specific toxic effects. Consequently, therapeutic measures have not been developed for silicosis even though its prevention is more or less a matter of common knowledge.

Technological progress and product development have been most rapid during recent years and in many respects have expanded far beyond our knowledge of the human component which they involve. On every hand, there are new technological advances, each with an unknown and possible hazardous element. There are new alloys, solvents, pesticides, plastics and gases. The discharge of effluents from industrial processes to the outdoors combined with increased concentrations of diesel and gasoline engine exhausts have created serious air pollution problems in many cities. The noise and vibrations of fabrication, the biological stresses of automation, the questions pertaining to mental health and absenteeism, and the problems unique to the female worker, constitute

critical areas for continued study. More precise methods must be developed for measuring and evaluating the degree of disability resulting from occupational injury and disease. Finally, specific

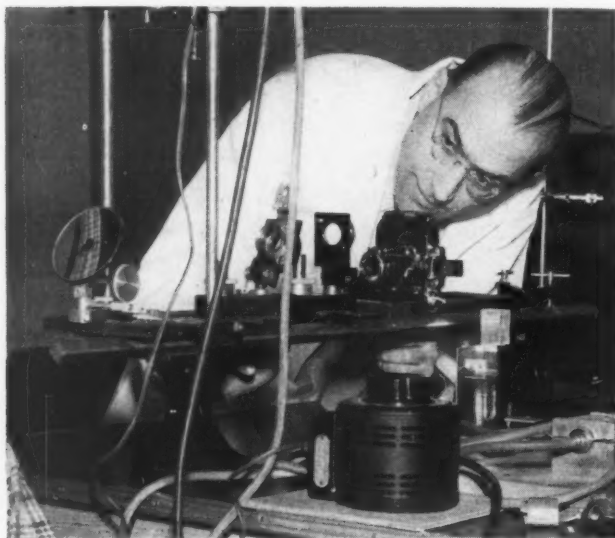


Fig. 6. A view in the laboratory for the study of noise as it affects hearing. Various custom-built instruments are being arranged by Mr. Domeier who is associated with Heinrich Kobrak, M.D., Ph.D., professor of industrial otorhinolaryngology in the department.

diagnostic methods and therapeutic measures including rehabilitation, must be defined if industrial medicine and hygiene are to be fully effective.

#### Service to Industry and Community

From this review of the scope of industrial medicine and hygiene, it is evident that there is much to be done in the way of education and research. Obviously, such efforts will be rather fruitless if in final analysis they fail to serve both industry and community in solving their mutual health problems. This aspect of service by a University Department of Industrial Medicine and Hygiene is no less important than teaching and research. In fact, they complement each other and in a sense have a practical relativity not unlike that which exists between the laboratory, the hospital, the industry and the community. The solution of many occupational disease problems, however, is usually beyond the scope of most industrial and community practices, while at the same time it is ideally suited for a University department organized for that purpose and for which the skills of other activities in the University can be utilized if needed.

Illustrative of the above, consider the problem attending the exposure of a population to the inhalation of an industrial substance suspected of producing cancer of the lung. In an attempt to study the possible relationships between the various factors involved, two general approaches are possible, namely, the epidemiological and the experimental.

Briefly, the epidemiological approach concerns the precise study of every member of the exposed population and of their atmospheric environment. More specifically, the study involves: the determination of where, how frequently, and under what circumstances the lung cancer occurs with respect to exposure to the substance; and the establishment of relationships between the parameters and the attack ratio for cancer of the lung. Those parameters have reference to the physical and chemical characteristics of the substance and of other agents possibly contaminating the atmosphere at the breathing level of the exposed individual and to the atmospheric concentration and biological toxicity of the substance at that level, and to the length and specific time of the exposure with respect to the health status of that individual's lung.

The experimental approach will throw light not only upon the capacity of the substance under controlled conditions to injure the lung, but also upon the specific nature of that injury, whether it is mild or severe, acute or chronic, productive of simple uncomplicated fibrosis, or whether it will initiate the abnormal growth of epithelium and will cause the development of cancer. The experimental results supplement the epidemiological evidence and indeed, they may constitute knowledge without which a valid opinion could not be formulated. The approach involves a variety of experimental animal species, subjected to one or the other of different test procedures, namely: the prolonged exposure to the inhalation of aerosols of the suspected substance as it is encountered in industry; the intratracheal injection and consequent pulmonary deposition of known amounts of that substance; the localization of the substance either intraperitoneally or subcutaneously; and the implantation of embryonal lung tissue in association with the substance.

The particular problem, presented above, is perhaps more difficult than others which could have been selected. It emphasizes, however, the diverse aspects of a problem that so frequently

complicates industrial health and that can be successfully attacked by the teamwork of individuals with training and experience in various branches of science, including epidemiology, biostatistics, medical diagnosis, pathology, radiology, cancerology, industrial hygiene, toxicology, chemistry and physics. Such a team of individuals is rarely found outside university structures or certain governmental institutions. Therefore, a University Department of Industrial Medicine and Hygiene should be a facility not only for teaching and research, but also one to which industry and community may come for assistance in problems of occupational health. Conversely, the department should be so situated that it can readily go to industry and community for guidance and help.

#### Departmental Accomplishments

The foregoing discussion briefly presents some concepts concerning occupational health envisioned by the Department of Industrial Medicine and Hygiene in the College of Medicine at Wayne University. In accordance with those concepts, the department has established and furnished various laboratories with major items of equipment including an emission spectrophotograph, x-ray diffraction spectrophotograph, and spectrophotometers. Special purpose laboratories have also been equipped to serve certain activities such as pathology and histopathology, analytical chemistry and biochemistry,

industrial hygiene, engineering and petrography. One such laboratory is concerned specifically with problems of hearing impairment resulting from exposure to industrial noise. Special quarters are used for the maintenance of monkeys and other experimental animals under the best possible conditions, including proper temperature, humidity and clean air. A room has been assigned for the roentgenographic study of animals. Also the large penthouse of the new Medical Sciences Building is used to hold several unique stainless steel chambers which have been especially designed and constructed for the prolonged exposure of experimental animals to the inhalation of specific aerosols under controlled conditions. Of greatest importance, the department has assembled a staff composed of a team with special training and abilities devoted to teaching and training, to research and service in the interest of occupational health. With the co-operation of the physicians and scientists and of industry, it is hoped that the new Department of Industrial Medicine and Hygiene at Wayne University will add to the great prestige of medicine in Michigan.

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#### EPITHELIUM-LIKE CELLS

(Continued from Page 271)

nant or truly epithelial nature of these cell strains cannot be inferred from their appearances in culture since one of the strains has been developed from bone marrow of a patient with diabetes mellitus in whom there is no present evidence of malignancy. The six strains can be maintained continuously and the cells can be released from glass by trypsin for making suspensions suitable for obtaining replicate specimens. Four have been maintained continuously for periods over six months to one year.

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# Maternal Deaths from Obstetric Anesthesia and Analgesia

## A Plan for Their Elimination as Worked Out on a Teaching Obstetric Service

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WITH the reduction of maternal deaths from other causes the relative number of parturient women who die from anesthesia is increasing.<sup>1</sup>

The major factors in these obstetric anesthesia deaths are the use of contraindicated agents and methods by persons unskilled in their use.<sup>2-4</sup> In those states in which maternal mortality studies are being made, anesthesia has been found to be the fourth to fifth most common cause of maternal death.<sup>5</sup> This advent of anesthesia as a major cause of maternal mortality constitutes a great challenge to the medical profession, and one which must and can be met. This is especially true since successful labor and delivery for mother and infant will occur in almost every case without maternal medication of any kind. Women do not die from the pains of childbirth, and physicians must see to it that no parturient women die from contraindicated or improperly administered analgesic and anesthetic agents. Relief of pain in childbirth has come to be so much a part of our life today that it behooves all physicians practicing obstetrics to learn to use analgesic and anesthetic agents moderately and safely. Death of either mother or infant from anesthesia is nearly always a preventable one, and thus it is possible to eliminate all but a very few of these unhappy fatalities.

In a recent study<sup>6</sup> there were thirty-four maternal deaths from anesthesia in Michigan during a four-year period in which there were 693,309 births. Since over three fourths of these women received some form of anesthesia, there was about one fatal case in every 16,000 anesthetics for parturition. This study showed that 60 per cent of the thirty-four deaths were from spinal anesthesia, most of which was given by the attending physician. In half of these cases there were definite contraindications to the use of spinal anesthesia,

and in two thirds of them there was improper technique—either excessive dosage, contaminated ampule, or unclean equipment. Inhalation anesthesia accounted for 23 per cent of the anesthesia deaths, and most of it was given by unskilled or inadequately trained nurse anesthetists. There was also one death from continuous caudal anesthesia and one from the mistaken injection of 5 to 10 cc. of epinephrine into the perineum in place of the intended local anesthetic solution. Two deaths occurred from excessive dosage in continuous spinal anesthetics, and these were given by medical anesthesiologists who apparently did not fully appreciate the fact that *the pregnant woman tolerates only half, or less, of the average dose given to a non-pregnant adult.*

In July, 1951, an anesthesia program was instituted on the obstetric service of Herman Kiefer Hospital; this program was devised on the basis of attempting to eliminate maternal deaths from anesthesia. During the preceding three and one half year period, during which 11,165 women were delivered, there were four deaths from anesthesia, a rate of 3.6 deaths per 10,000 parturitions. Since the institution of this plan, we have delivered only 20,650 women without a death from anesthesia, but we hope to be able to go on with practically no more fatalities for a long time. This has been accomplished in an unusual clientele, since it is composed entirely of the medically indigent women of the City of Detroit, many of whom have had no prenatal care when they first present themselves in labor or in trouble. Thus many are very poor anesthesia risks. The clientele is unusual from another aspect, namely, that about 45 per cent either refuse any form of analgesia and/or anesthesia or arrive too far along in labor to permit the administration of any. This leaves us with about 2,900 cases who will receive some obstetric anesthesia each year.

Since we are running a teaching service and a large resident training program, we cannot arbi-

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## MATERNAL DEATHS—STEVENSON

trarily abolish this or that commonly employed form of anesthesia as we must teach and train our residents and interns in obstetric anesthesia as well as in obstetrics. What we did in our program was to set up strict indications and contraindications for the uses of spinal, continuous caudal, inhalation, intravenous pentothal and local anesthesia, also outlining methods and techniques in proper detail as well as dosage limits of the agents used. Also, through the generous and helpful co-operation of Dr. Ferdinand Greifenstein, professor of anesthesiology at Wayne, we began to send our more junior obstetric residents to his anesthesiology resident training service at Detroit Receiving Hospital for six weeks of intensive training and experience. This simple program has been very effective, as shown by our results to date. We believe that it is reasonable to assume that maternal deaths from anesthesia can be almost entirely eliminated. Even though we may fall somewhat short of this admittedly Utopian goal, our sincere and energetic striving to attain it, we believe, is one of the needed reforms in obstetric practice today.

Under the effect of the program the incidence of spinal anesthesia decreased from 32 to 10 per cent, and we believe that a 10 per cent incidence is a proper figure for a city hospital teaching service such as ours. Our rules regarding the use of spinal anesthesia are that only a skilled resident may give it, or he may scrub and instruct an intern in its use. It is not to be given to any patient having hyper- or hypotension, nor to one who has had any appreciable blood loss. We rarely give it to multiparae, and use it only in those sections in which the patient cannot be counted upon for proper co-operation under local anesthesia. We have not used any continuous spinal anesthesia for five years and do not advocate its use in obstetrics on any basis.

Our spinal drug dosages for vaginal delivery are: Procaine 25 to 50 mg. with or without dextrose, metycaine 20 to 30 mg. with or without dextrose, pontocaine 2 to 5 mg. with 5 per cent dextrose, and nupercaine 1.5 to 3 mg. with 5 per cent dextrose. We do not exceed these limits. When dextrose has been added to the anesthetic agent, we slowly inject it through the third lumbar interspace with the patient sitting up, and then gently place her down flat on her back, with her legs extended and flat, from thirty to forty-five seconds following the injection. We do not inject the spinal anesthetic during uterine contractions,

nor do we give it to women who are having tumultuous second-stage labor. The spinal drug dosages for cesarean section are: procaine 60 to 80 mg., pontocaine 6 to 8 mg., and nupercaine 3 to 5 mg. If the level of anesthesia does not go high enough for a full length lower midline abdominal incision, or if the anesthesia wears off before closure of the abdominal incision, we advocate the supplemental use of local anesthesia. Currently we are employing 0.5 per cent xylocaine solution as a local anesthetic with very adequate results, limiting the total amount given in any one case to 80 cc.

We give just enough caudal anesthesia to permit each resident some experience in its use. Our residents learn the basic aspects of caudal anesthesia administration during their six weeks on the anesthesiology service. We recognize that continuous caudal anesthesia for labor and delivery bestows a marvelous relief from pain on the mother, but the method is so dangerous for both mother and infant that it should never be used except in the hands of an expert skilled in its use, and in a hospital where full necessary equipment for artificial respiration is available as well as trained personnel being on duty twenty-four hours a day.

The employment of inhalation anesthesia in our program has consisted solely in the use of open drop ether or closed system ether-oxygen, and it is given in only about 2 per cent of deliveries. We have not used any nitrous oxide simply because its anesthetic effect is dependent principally upon its causing asphyxia, and asphyxia is the main thing we wish not to give to the infant *in utero*. We do not use any other anesthetic gases, the exception being that Dr. Greifenstein, or one of his staff from the department of anesthesiology, may exercise their own judgment in this regard when they come in to help us on an exceptionally poor-risk hypertensive patient who needs a section and is not a fit candidate for either local or spinal anesthesia. Such cases, fortunately rare, always tax the ingenuity of even the ablest anesthesiologist available, and probably represent the major portion of that final, irreducible minimum of cases which will comprise the maternal anesthesia death group of the future. Our major indication for ether anesthesia is transverse presentation of the fetus, with prolapse of an arm and/or the cord, the cervix being from 8 centimeters to fully dilated. Such a situation is our sole indication for internal podalic version in single pregnancy, and deep ether anesthesia is essential for this procedure in practically all cases.

Intravenous sodium pentothal has been used in the past (prior to 1952) on our service in some instances to supplement cesarean section being performed under local anesthesia following delivery of the infant. The effectiveness of xylocaine as a local anesthetic agent has been so great, however, that we have now found the need for such supplementation to be practically nil. Following delivery of the baby, in such a case, we may give  $\frac{1}{6}$  grain of morphine intramuscularly, or 60 to 100 mg. of demerol. We do not give more than 25 mg. of demerol intravenously, and then it is slowly injected over a period of several minutes; the remainder of the dose is then given intramuscularly.

We have urged the increasing use of pudendal nerve block anesthesia for vaginal deliveries, and of local anesthesia for sections, and have recommended that all multiparae of a parity of four or greater at least be given local infiltration of the perineum.

Prior to the institution of our program only 7 per cent of our patients were delivered under pudendal nerve block, or had their sections done under local anesthesia. Since July, 1951, this incidence has increased to 48 per cent of all deliveries, or to about 75 per cent of cases receiving obstetric anesthesia. Both local infiltration and pudendal nerve block anesthesia have been steadily increasing in popularity among our residents and interns, and most of them are so adept in blocking the pudendal nerves that they seldom miss obtaining a good perineal saddle area of anesthesia. We find pudendal block anesthesia to be completely adequate for forceps deliveries, for most cases of manual rotation of the head (between contractions), for delivery of twins, for easy breech deliveries as well as breech extractions, and we find no difficulty in performing manual removal of the placenta if the patient is at all co-operative. One of the greatest benefits of pudendal block anesthesia is that *nearly all women will deliver spontaneously through an adequate episiotomy unless the obstetrician interferes with the normal progress of labor and uses forceps*. Another very wholesome benefit is that the obstetrician *has to be with his patient from the latter part of the first stage of labor on through completion of the delivery, which is certainly fit and proper from all aspects*.

There are many contraindications and limitations to the use of spinal, caudal, inhalation, and intravenous pentothal anesthesia in pregnant women, but there are only three rules governing the

use of local anesthesia which must be strictly observed. These are:

1. Local anesthetic agents should not be given when there is a history of drug sensitivity, particularly to those drugs commonly used for such anesthesia.
2. Care must be exercised not to inject the drugs intravenously, and this can be assured by carefully pulling back on the syringe plunger before each injection.
3. The toxic dosage limits of the drug must not be exceeded.

While we are aware that there have been some maternal deaths from local anesthesia we are sure that in the hands of the average physician who learns to use it properly it will be many times safer than any other kind of anesthesia he might employ. Any physician who is sufficiently interested in learning how to perform pudendal nerve block can do so. The method, as described and pictured so well by Klink,<sup>6</sup> of the Temple University Hospital in Philadelphia, is the one we use, teach and recommend. Our technique includes the injection of about 6 cc. of 1 per cent xylocaine solution through a 22-gauge, 5-inch needle (with protective hub), into the mouth of Alcock's canal on each side of the pelvis. We do not add any epinephrine to the local anesthetic solution because xylocaine has a relatively long duration of effect; the use of epinephrin also is dangerous since *it sensitizes the heart muscle to most drugs* which might be commonly used in connection with delivery. Neither do we add any hyaluronidase, since xylocaine has some penetrating and spreading properties of its own.

Many of our internes learn to perform pudendal nerve block quite well during their month on the obstetric service, and all of our residents learn to perform section easily under local infiltration anesthesia. We believe that any physician who is adept at the performance of section can learn to do it well under local anesthesia, *provided he has a sincere desire to do so*.

The author has used pudendal nerve block anesthesia for 98 per cent of all the vaginal deliveries in his private practice in the past five years, and has performed 90 per cent of his sections under local anesthesia; his incidence of forceps delivery is about 5 per cent, since all but a few

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# Johanson Urethroplasty for Repair of Urethral Strictures

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**O**PERATIVE repair for stricture of the urethra is not a new surgical procedure. Dugas, in 1836, reported the first case of complete resection of the urethra for the repair of a stricture. It was treated postoperatively by an indwelling catheter without any attempt to suture the ends together. Many other urethroplasties have been devised since then, but are useful mainly in short strictures. The major premise of these techniques is to dissect free and excise all involved scarred urethra and surrounding tissues, and then a direct end-to-end anastomosis of normal tissues is performed. Grafting techniques have also been devised but require follow-up postoperative dilations for an indefinite period.

The Johanson type urethroplasty for the repair of urethral strictures is an application of the Denis Browne technique for hypospadias. The original ground work for this type of repair was done by Duplay as early as 1874, when he sutured buried epithelium around a catheter. G. Marion and J. Perand in 1942 used Duplay's method for hypospadias repair but modified it by making the constructed canal continuous with the original urethra. Denis Browne in 1949 presented his method for construction of the urethra in hypospadias. It differed from the above authors in that (1) the buried strip was wider, (2) the strip was left fully intact without any undercutting, (3) the buried epithelium was not sutured over a splinting catheter, and (4) a dorsal relaxation incision was used in all cases.

Johanson, in reviewing the results of Denis Browne, felt that he could use the principle of a buried intact epithelial strip to develop a surgical cure for any type of urethral stricture. It was also his desire to be able to apply the operation regardless of pathogenesis, extent, or degree of severity of

the stricture. He felt, that to be a worthwhile operation and an improvement on preceding urethroplasties, no after treatment should be required, especially dilations. The first stage of this operation creates an artificial hypospadias but also serves two time-honored principles; one, the draining of an infected area, and two, diversion of the urinary stream from this infected area.

In applying the buried intact epithelial technique, the following diagnostic criteria, indications, and contraindications were employed.

## Diagnosis

All patients were studied thoroughly. Upper urinary tract studies, naturally, were checked by intravenous pyelograms since the introduction of the cystoscope, in most cases, was impossible. The diagnosis of the stricture of the urethra as to caliber, length, number, and location was evaluated by olive tip bougies and oblique urethrograms using 30 per cent sodium iodide in a viscid solution of lubricating jelly.

## Etiology

The etiology of the cases presented includes: (1) those mainly due to an old gonorrheal urethritis, (2) one due to trauma, (3) one postoperative following a transurethral resection, (4) one chemical in origin, (5) one postoperative stricture in a previously repaired hypospadias with repeated periurethral abscesses, (6) one in a congenitally stenosed urinary meatus with resulting dense stricture along the entire pendulous urethra.

## Indications

Our indications for surgery are not as liberal as Johanson's. We felt that any non-tuberculous stricture, 2 cm. or more distal to the membranous urethra, single or multiple, that did not respond to gentle dilatation, was amenable to this type of repair. This includes a large number of patients seen at Detroit Receiving Hospital who return re-

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peatedly with "tight" filiform strictures with large periurethral abscesses and extravasations, typical "flowering pot" perineums. This includes patients whose strictures could not be dilated above No. 16 F. without producing either severe pain, profuse bleeding, acute ascending pyelonephritis, or an acute prostatitis. Johanson, on the other hand, does not limit his repair as to location and states that he has excised fistulous tracts and fibrous tissue en bloc proximal to the membranous urethra with complete continence following surgery.

### Contraindications

The only contraindication to this procedure is dependent on the patient's ability to stand the anesthesia required. One word of caution—a first stage urethroplasty should not be performed too soon after an acute periurethral abscess; it is best to wait at least six to eight weeks or until all inflammatory changes have disappeared. We learned the hard way; we encountered a severe hemorrhage because the tissues were extremely friable and accurate hemostasis was impossible.

### Technique

We followed the technique as outlined by Johanson in his original article and by Flocks and Culp in their book entitled *Surgical Urology*, with minor variations.

The patient is placed in a mild lithotomy position, so that either perineal or suprapubic regions can easily be exposed. The operations is divided into two stages. The first stage varies as to the location of the stricture in the urethra. It may be divided into meatal and those distal to or proximal to the perineal portion of the urethra.

1. In meatal stenosis or strictures which extend down toward the bulb, the incision begins at the meatus and extends to a point at least 2 cm. beyond the strictured area.

2. In strictures distal to the perineal urethra, a No. 26 sound is passed to the involved area. No attempt is made to force the sound beyond this point as only undue trauma will result. An incision is then made in the midline of the ventral portion of the penis, through skin, fascia, and corpus spongiosum, down to the sound. The incision is extended in a distal and proximal direction until at least two cm. of normal urethra is exposed. If there are no draining sinuses or periurethral abscesses, one need not dissect or excise the scarred urethral mucosa or corpus spongiosum.

If the stricture is so severe that the proximal end cannot be identified accurately, a suprapubic cystostomy and passage of a sound through the vesical neck down to the stricture site may be performed. The skin edges of the penis are then sutured to the edges of the urethral mucosa with 3-0 chromic catgut or 4-0 black silk.

3. If the strictured area extends into the perineal portion of the urethra, a flap of scrotal tissue must be inverted to give one enough skin for closure of the urethra in the second-stage operation. The technique varies, in that, an incision is made in the perineum through skin, subcutaneous tissue, central tendon and bulbocavernosus muscle to the strictured area. The urethra is divided until at least 2 cm. of normal urethra is seen distally and proximally. The proximal urethra may have to be identified by passing a sound from the vesical neck to the strictured area. In this area it is very important to excise all fistulous tracts and surrounding scar tissue completely. Next, the scrotal skin flap, that is to be inverted, is prepared. This is done by making an incision along the median raphe 3 to 4 cm. long. The skin between the inferior point of the scrotal skin incision and the transverse incision in the perineum is freed. The dissection is continued until a bridge of tissue is formed that can be inverted and sutured without tension to the normal urethra. The edges of the scrotal skin are then sutured to the edges of the incised urethra. This forms a funnel shaped external urethrostomy which Johanson states gives a better functioning permanent urethrostomy than the type that is located posterior to the scrotum. The perineal incision is closed by approximating the bulbocavernosus muscle, reconstructing the central tendon and closing the skin. A No. 18 F. Foley catheter is left indwelling for three to four days after this procedure. Johanson insists that even if hair-bearing areas are inverted, the hair will soon disappear and afford no hazards. We do not fully agree in this premise; but perhaps the future will clarify this difference of opinion.

The interval between stages varied with the healing powers of the patient and averages from eight to ten weeks. The second stage technique is quite universal. Urinary diversion should be performed, and it was done by suprapubic cystostomy in all of our clinic patients while a perineal urethrostomy was performed in all of our private patients. A strip of urethra and surround-

# URETHRAL STRICTURES—JAFFAR ET AL

TABLE I. CLINIC PATIENTS—DETROIT RECEIVING HOSPITAL

Name	Age	Caliber		Etiology	Type O. R.		Hospitalization		Complications
		Preop.	Postop.		1st	2nd	1st	2nd	
Leonard, J.	38	acute ret. 4F	22F	GC 1939	Scrotal	flap	4- 2-55	6-12-55	7-13 Debridement granulations. 12-8 Stenosis distal opening. 2nd stage closure 1½ cm.
Isaiah B.	47	12F	24F	GC 1940	I		6-14-55	8- 5-55	Non funct. rt. kid. I.V.P. Pyuria rt. neph. 7-26-55.
Benphy F.	20	10F	24F	GC 1948		II	8- 5-54	10- 4-54	Uneventful.
James T.	32	14F	22F	GC 1941	I		5-16-55	8-23-55	GC—after 1st stage 3-55
Paul B.	32	4F	24F	GC 1939	I		1-10-55	6-13-55	Uneventful.
Earl T.	33	12F	24F	GC 1938	I		10-11-55	12-30-55	Fistula after 2nd stage. Closed spontaneously.
L. C. Shermom	24	ret. 0	24F	?		II	1-10-55	10-28-55	Uneventful.
James B.	50	14F	24F	GC trauma	I		2- 4-55	5-26-55	Incontinence preoperative. Complete continence postoperative.
Grover R.	50	16F	24F	GC		II	4- -55	6- -55	Post II urinary fistula. Closed spontaneously.
Lee W.	63	12F	—	Etio. TB?	I		2-14-55	—	TB sanatorium. Expired millary TB 4-20-55.
A. Arnold	37	4F	26F	—	I		11-15-54	1-27-54	Voids well.
James D.	32	16F	24F	GC	I		10- -54		Sent to Jackson Prison, Jackson, Michigan.
Edward S.	33	4F	24F	GC 1947	I	II	11-29-54	3-21-55	Postop. hemorrhage 12-18-54. Urethral fistula following 2nd stage. Closure of fistula 6-6-55.
Andrew P.	25	10F	22F	CuSO <sub>4</sub> GC 1947	I		11- 1-54	1-20-55	Perineal infection.
Harvery W.	67	16F	24F	GC 1915		II	12- 6-54	5-19-55	Practically spontaneous 2nd stage closure.
Fred W.	40	16F	22F	GC 1930 14 prev. OR	I	II	9-20-54	1-17-55	Dissection of perineum 1st stage. Revision proximal at end 1-22-54. Urethral fistula following 2nd stage. Spontaneous closure.
George K.	68	10F	24F	T.U.R. Det. Ost. Incont.	I		2- 7-55	5- 2-55	Uneventful—complete continence postop.
William S.	70	16F	16F	Straddle injury age 16		II	5-24-55	7-12-55	Required post 2nd stage dilatation.
Floyd H.	69	0	24F	8-9-55 Periurethral phlegmon GC	I	II	10-18-54	3- 3-55	1st stage radical dissection perineum and Lt. orchidectomy. 2nd stage and cystolithotomy. Urethral fistula closed 4-28-55.
Joseph W.	74	14F	24F	Dil. since 1935 periur. abscess 3 mos. prev. GC in youth	Inversion of scrotal flap- supra to find proximal urethral.		11-11-54	2-16-55	2nd stage 1-29-55 developed perineal fistula. Closed spontaneously.
Marchello	57	16F	28F	GC		II	7-27-55	9-20-55	False passage into membranous. Retention-hematuria. 1st degree right hydronephrosis.
Mika	37	16F	28F	Cong.	Meatal extends to penoscrotal junction.		3-14-55	5-24-55	Recur. bouts of pyelonephritis. Prostatitis. Rt. hydronephrosis, 1st degree.
Brian	28	16F	26F	Cong. hypospadias	I		1-18-55	4-18-55	Recurrent bouts of periurethral abscess. Recurrent pyelonephritis.

ing skin approximately 2 cm. wide or 75 per cent of the circumference of the urethra desired, is left intact. The lateral skin edges of the penis or scrotum are freed for a distance of 2 to 3 cm., so that the skin edges can be approximated over the buried strip without tension. A dorsal relaxation

incision is made if necessary. The skin is closed with interrupted sutures of chromic 3-0 or 4-0 black silk. The tension is taken off this suture line by using No. 32 wire held in place with lead shot. Care must be taken not to draw the tension suture up too tight as the lead shot will cause necrosis of

the skin and possibly result in a fistula. The wire sutures are removed on the seventh to eighth day, the black silk on the tenth day if healing appears complete. The patient is allowed to void on the tenth day if the wound appears solid. Many patients in their anxiety to know the results voided as early as the second day.

### Complications

We had one case of rather severe postoperative hemorrhage following a first-stage operation. As mentioned before, we operated too soon after a periurethral abscess, when the tissue was very friable and hemostasis difficult. We resorted to a perineal pressure dressing, and after a period of about five days the bleeding stopped. We had a total of 6 postoperative fistulas. Of these, four occurred along the approximation of the skin edges and two were secondary to pressure necrosis from the lead shot. Three of the fistulas closed spontaneously. Three required simple surgical closure with uneventful postoperative course. One patient developed an infection at the site of the perineal incision. All of these patients had healing without recurrent stricture formation. Only one

patient was a failure as to surgical repair and required postoperative dilatation.

### Conclusion

The application of the buried intact epithelial tract technique for the repair of urethral stricture after the method of Johanson with certain modifications has been presented. This procedure was used in highly selected cases when conservative treatment either failed or became unbearable. In our hands it has been very successful, justifiably so, since we have had but one failure. It is our firm conviction that as time goes on and our technique improves we will attempt a far greater number with a greater percentage of excellent results.

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## HORMONE THERAPY IN RHEUMATIC DISEASES

(Continued from Page 282)

toxic effects, careful selection of drug and dosage is necessary in most instances. Therapy with large doses of hormones for prolonged periods in patients with carditis due to rheumatic fever seems to lower the incidence of residual organic heart disease and in this situation the risk of side effects seems worth taking.

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# Pigmented Skin Lesions

## Treatment with Monobenzyl-ether of Hydroquinone

By Edward W. Kelly, Jr., M.D.

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IN 1939 Oliver, Schwartz and Warren<sup>1</sup> proved that leucoderma found in rubber workers was due to the action of monobenzyl-ether of hydroquinone. Its use as a satisfactory therapeutic agent for the correction of hyperpigmentation had to await material of greater purity than the industrial product. The purpose of this brief discussion is to outline my personal experience with the response of melanin hyperpigmented skin lesions to an ointment containing the monobenzyl-ether of hydroquinone (Benoquin)<sup>®\*</sup> and to compare the results with the reports of earlier workers. Twenty cases were followed from twelve to sixteen months. The patients in this series were all Negroes. Chloasma was the most common condition. There were several cases of residual pigmentation following lichen planus, lupus erythematosus and the residual scars of acne vulgaris. There was one case where an attempt was made to bleach the normal skin to match the leucodermic areas of extensive vitiligo.

Varying strengths of Benoquin in different ointment bases were used. The concentration varied from 5 to 20 per cent. On the initial visit the patients usually were given the 5 per cent ointment, and the result was observed one week later, after daily applications. If there was no change, they were instructed to use the same preparation more often with gentle massage or they were given a stronger ointment. The absolute necessity of applying the medication only to the lesions and keeping it away from surrounding areas was emphasized. It became evident at an early date that the patients had to be watched closely to see that they did not depigment beyond their norm and

did not depigment the normal skin by careless application. A simple color chart devised by Gates<sup>5</sup> was found helpful in evaluating the effect. With experience the rate of depigmentation could be forecast, being inverse to the age of the lesion and the depth of pigmentation. It was also found that only those lesions responded well to treatment in which the excess pigment was in the epidermis. Dermal pigmentation was not influenced by this therapy.

Some illustrative cases will be described in detail:

*Case 1.*—A thirty-seven-year-old woman had chloasma on each cheek measuring 1 by 2 inches. There were two shades of difference between the lesions and the normal skin (Gates color chart). Five per cent Benoquin was started daily. In two weeks she had depigmented beyond her norm. Medication was stopped and in one week all areas of the skin were the same color. Weekly use of the ointment was advised and this has kept her skin normal for six months.

*Case 2.*—A thirty-year-old woman had hyperpigmented scarring on the face. The lesions resulted from a fairly extensive case of discoid lupus erythematosus. Ten per cent Benoquin was found more suitable for her skin, and in four months her scars were one shade lighter than her normal skin. She preferred the lighter shade as it enabled her to more cleverly disguise her scars. She had been maintained on the five per cent strength for weekly application for six months.

*Case 3.*—A sixteen-year-old girl had small discrete hyperpigmented scars over her entire face as a result of traumatized acne. She applied the medication with cotton applicators directly to the dark areas. With care she was able to depigment only the involved areas in six weeks. She has remained normal for four months without medication.

*Case 4.*—In this case an attempt was made to depigment the normal skin to harmonize with the leucodermic areas in a person with extensive vitiligo. This was a fifty-eight-year-old woman who had lost most of her pigment except on the face and extremities. After trying various strengths the 20 per cent ointment was chosen. An area on the leg was the original test site. The response was good. The face was then treated, and

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\*The preparations used in this study were supplied by the P. B. Elder Company, Bryan, Ohio, through the courtesy of Mr. Howard E. Parker.

today one year later there is possibly one shade of difference between her face and her depigmented skin, whereas originally there were four shades. This confirms the experience of Stolar, as quoted by Lerner and Fitzpatrick,<sup>3</sup> who depigmented a person who had some undesirable pigmented remains with her vitiligo.

There are some undesirable side effects to be watched. Two cases will be cited to illustrate this point.

**Case 5.**—A woman, aged thirty-five, had two large areas of chloasma over her cheeks measuring 3 by 4 inches. There were two shades of difference between the lesion and her normal skin. She was extremely concerned about her "spots." She was instructed to use 5 per cent ointment every day. After seeing some depigmentation she took matters in her own hands and began using the ointment several times daily along with vigorous massage. In two weeks she had depigmented four shades beyond her norm. Medication was stopped. She repigmented in four weeks a shade beyond the norm. The ointment was resumed and the previously described results were noted. The vicious cycle was never broken, and a satisfactory result was not obtained. Her emotional state became so bad at one stage that psychiatric help was sought.

**Case 6.**—A woman, aged twenty-eight, when first seen was depigmented on the face three shades beyond her norm following the use of 20 per cent Benoquin® for chloasma. OxSORALEN lotion\*\* was used to encourage repigmentation. There was visible progress until she decided to reapply the 20 per cent Benoquin ointment. She again depigmented to the same color that she was when first seen. She also developed a few leucodermic areas on the neck which were discrete and removed from the original area. These lesions may have been the result of inadvertent contact or may have been due to other factors.

No cases of true sensitivity were encountered. In a few cases treatment was interrupted because of irritation following one of several bases used, but was resumed in a few days without ill effect. No symptoms of systemic absorption were noted.

Some pertinent histologic observations were made on biopsies before and after treatment. The sections were treated with dioxyphenyl alanin (dopa) for demonstration of the enzyme concerned with the melanin formation and with silver for better visualization of melanin granules present.

The comparative count of the melanocytes did not vary on the before and after specimen. The characteristics of these cells were not affected. The after specimen showed less intensity in its

\*\*A product of the P. B. Elder Company, containing eight-methoxypsoralen, one of the active ingredients of Ammi majus L.

staining qualities when treated with dopa. Under the silver stain the melanin granules were seen shedding with the keratin.

### Discussion

Twenty cases were treated, fifteen of which showed excellent results. The result was fair in two, poor in three cases.

The lower concentration of the drug was found more useful, the higher concentration being reserved for the more stubborn cases.

Forman<sup>4</sup> in 1953 reported a case of hyperpigmentation treated with the 5 per cent concentration of the monobenzyl-ether of hydroquinone with good results. Denton et al<sup>2</sup> in 1952 demonstrated by patch test that the higher the concentration the more rapid the depigmentation. In this series care had to be exercised in the use of the drug so that the proper amount of depigmentation would be obtained. It has been stated by Lerner and Fitzpatrick<sup>3</sup> that in the white skin only the hyperpigmented areas were affected but in the Negro the normal skin could also be affected. The latter statement was borne out in my material.

The histologic appearance of the melanocytes as to number and morphology were the same before and after treatment. The only difference observed was a less intense dopa reaction in the treated skin suggesting some interference with the oxydative enzyme. The action by which Benoquin depigments has not been completely worked out but Denton et al<sup>2</sup> demonstrated with *in vitro* studies that there was a blocking action in some of the steps of melanization. Oliver et al<sup>1</sup> in quoting Muller's report stated that skin depigmented by monobenzyl-ether of hydroquinone gave a negative dopa reaction. This probably refers to skin completely depigmented.

### Summary

1. Benoquin, an ointment containing monobenzyl-ether of hydroquinone is useful in the treatment of epidermal hyperpigmented lesions.
2. The treatment is best started in a low concentration (5 per cent). Higher concentration should be reserved for unusually stubborn cases.
3. Care must be exercised as to frequency and method of application, otherwise excessive loss of pigment may occur.
4. No cases of true sensitization were seen.

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# Transmetatarsal Amputation in Peripheral Vascular Disease

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SINCE 1944 McKittrick and his coworkers have used the transmetatarsal amputation in the treatment of carefully selected patients with gangrene limited to toes. Although these authors have demonstrated in a significant number of cases that the procedure is generally successful, there is still much debate as to its real value. It is apparent that many surgeons dealing with peripheral vascular disease have had no experience with this operation and hesitate to try it. There are many who still feel that an amputation above or below the knee is indicated for the treatment of atherosclerotic gangrene of toes. Others, such as Pratt and Samuels, feel that the transmetatarsal amputation has little to offer, since it can be successful only in those patients who can be adequately managed by limiting therapy to the involved toes.

At the Dearborn Veterans Hospital, since 1947 all amputations have been performed on the Orthopaedic Service. Those patients with complications of peripheral vascular disease are seen by both the Surgical Peripheral-Vascular Service and the Orthopedic Service, and the combined treatment program is outlined. We have been using the transmetatarsal amputation since 1950 in the belief that, as the medical and surgical treatment of peripheral vascular disease improves, patients live longer and all amputations become more successful; moreover, we believe that long-term function is a primary consideration. It is our feeling now that, in properly selected patients, the transmetatarsal amputation results in an excellent functioning extremity, with relief of symptoms, and that

it often prevents a more disabling amputation at a higher level.

In peripheral vascular disease, gangrene results either from sudden occlusion of a major vessel, or from a mild precipitating factor in gradually progressive peripheral insufficiency. The common precipitating factors are exposure to heat, cold, or trauma, and infection following trimming of corns or nails, or epidermophytosis. We are concerned with this second group of patients. In that group it is recognized that the patient has a generalized disease and that, once gangrene develops in one toe, he is likely to have repeated episodes, with involvement of both feet, and with frequent periods of hospitalization. Gangrene and infection beginning in the toes is frequently progressive, spreading to the dorsum of the foot or along the plantar aspect of the foot and finally requiring a major amputation.

For these reasons it appears that, in properly selected patients with gangrene limited to toes, removal of all the toes is indicated both as treatment for the presenting disease and as a prophylactic measure.

We have now performed thirty-three transmetatarsal amputations for gangrene with results which parallel those of McKittrick and his associates. On the basis of that experience we would like to discuss the proper selection of patients, the preoperative preparation, the operative technique, and the postoperative care, with a few additional remarks on the rationale of treatment. It is hoped that there will be a more widespread use of this operation.

According to McKittrick and his coworkers, the operation is indicated for gangrene of all, or a part, of one or more toes, providing the gangrene and infection are stabilized and do not involve the dorsal or plantar surfaces of the foot. They also include those patients who have stabilized open infections in the distal portion of the foot, if the entire lesion can be excised and primary closure can be obtained. They emphasize that it is diffi-

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cult to determine the possibility of success in a foot with deficient circulation on any basis other than clinical judgment. In general, the poorer the circulatory and nutritional status of the foot, the less chance there is of success. However, the absence of palpable pulsation below the iliac or femoral artery is no contraindication to this operation. The special diagnostic measures used in peripheral vascular disease have been of no material benefit. If the skin on the dorsum of the foot is warm and has good nutrition, success can be expected. Many patients fall into a borderline category and must be advised that the possibilities of healing are questionable. However, there are many patients with healed transmetatarsal stumps who preoperatively had no pulsation below the femoral artery and who had cool, shiny, thin skin on the dorsum of the foot. Success has not been seen in cases in which there was discoloration on the dorsum, except for redness from inflammatory changes.

The preoperative period of preparation is considered to be the most important factor in determining success. During that period of two to three weeks, the patient is restricted to bed rest with the extremity flat in bed, and with the head of the bed elevated a few inches. It is hoped that this rest will decrease the circulatory requirement, prevent additional trauma, allow the control of infection, and prevent the extension of gangrene. Transmetatarsal amputation is indicated for those patients whose gangrene is stabilized and not progressive.

During the period of preparation, the control of infection is an important problem. The presence of infection should be assumed in all patients, including those who have been classified as having "dry gangrene" or ischemic necrosis. It is always possible, in these mummified toes, to demonstrate that at the line of demarcation there is a break in the skin, and in most cases there is a small amount of pus. In these patients, unless suitable precautions are taken, infection is introduced. Therefore, all patients are given antibiotics, and loose sterile dressings are worn at all times. The sterile dressings are removed once or twice daily for a fifteen-minute foot bath in tepid water to which some white soap has been added. The foot baths are used to promote drainage and to allow a gentle débridement. In the foot bath, necrotic tissue which is spontaneously separating can be removed

with forceps and scissors, but viable tissue should never be touched.

Infection as a major problem is usually found in the group of diabetics with arteriosclerosis. There may be gross spreading infection, particularly along the tendon sheaths in the plantar aspect of the foot, requiring amputation of a toe or a wide incision and drainage, including the removal of the toe and its metatarsal. Only when infection has been completely controlled and it is obvious that there is no progression of gangrene, can the transmetatarsal amputation be considered.

Several important points in the operative technique must be considered. The amputation level is just proximal to the metatarsal heads, so that at the conclusion of the amputation, for all practical purposes, there is only bone between dorsal and plantar layers of skin and subcutaneous tissue. A more proximal level would pass through the deep structures of the foot, including relatively ischemic muscle. The dorsal incision begins midway between the dorsal and plantar surfaces on either side, and with one sharp incision down to the bone it is continued in a straight line across the dorsum to the mid-point on the opposite side. This is at the level of bone amputation, no dorsal flap being formed. The plantar incision begins at either end of the dorsal incision and parallels the proximal flexion crease of the toes, but runs one centimeter proximally to the flexion crease. This incision likewise must be sharp and directly down to bone. The long plantar flap thus obtained is dissected back to the level of bone amputation. The metatarsal heads, beginning with the first, are then removed with a saw. The saw blade is allowed to rest against the previously cut metatarsal, which serves as a guide, so that an even stump is formed. The plantar tendons and sesamoids are then removed at the bone level. The closure is made preferably in one layer with non-absorbable suture. As atraumatic a technique as possible is mandatory. At no time should the skin margins be touched with forceps. Tissues should be handled lightly with the fingers and a moist gauze sponge. Also, the closure should be meticulous, leaving no dog-ears, as these will slough out. A large bulky dressing is applied to the whole foot and ankle, with gentle pressure. Since these feet will not tolerate much pressure, the skin over the malleoli and the base of the fifth metatarsal should be carefully padded, and adhesive tape should never be placed directly on the skin.

After operation the patients return to strict bed rest, with the head of the bed slightly elevated. At least half of the sutures should remain in place for two weeks. Buerger's exercises are begun ten days to two weeks after operation, in preparation for ambulation at three weeks; by that time, healing is usually complete if it took place by primary intention. The patient at first walks with loose slippers until all swelling has gone and then wears his usual shoes. The toe is stuffed with wool or cotton and a thin piece of spring steel is placed between the layers of the sole. Some patients have preferred to remove the spring steel. The final gait is excellent at a moderate walk, but a limp appears with increasing rates of movement.

Deformities from unbalanced musculature do not develop in the stumps, and they will stand up well under use. While we have adequate follow-up studies on the series to be reported here, the figures of McKittrick and his associates<sup>1</sup> are more significant. They reported on a group of diabetic patients followed for as long as fifty-seven months. Of 146 patients who left the hospital with healed stumps, ulceration recurred in only twenty-four (16 per cent), and only six of these had amputation at a higher level. They reported that, of 202 patients followed, 135 (67 per cent) had satisfactory results; thirty-two (16 per cent) had unsatisfactory results; (they were ambulatory, but with incomplete healing or recurrence of ulceration); and thirty-five (17 per cent) had failures (with progressive difficulty and amputation at a higher level).

Using the technique described, we have performed thirty-three amputations on thirty patients with peripheral vascular disease. Of these, five were for thromboangiitis, eight for arteriosclerosis, and twenty were for diabetes with arteriosclerosis. Ten patients had primary healing; fifteen had secondary healing; two still have small granulating areas which are expected to heal; and six were failures which have required reamputation. It is believed, however, that, no matter what criteria are used for selecting patients, there will still be some failures. Moreover, it is probably true that, unless there is a certain percentage of failures in any series, not enough transmetatarsal amputations are being done. The patients and his relatives should be informed that failure or delayed healing is a definite possibility and, unless the patient and the physician

are prepared to deal with these complications, the operation should never be attempted.

The two most common causes of delayed healing are marginal necrosis of the wound edges and wound infection. We include with marginal necrosis the sloughing of dog-ears and extension of gangrene to the dorsum of the foot. With wound infection we include minor stitch abscesses and gross wound infection. The wound complications should be treated in the same fashion in which the foot was prepared for surgery, that is, with antibiotics, sterile dressings, and daily tepid soaks, allowing for drainage, spontaneous separation of necrotic material, and healing by granulation tissue. We feel that surgical removal of eschars, secondary closures, and skin-grafting should be avoided.

In consideration of specific factors which contribute to success or failure, an attempt was made to correlate palpable pulsation in the extremity and the rate of healing. Only three patients had palpable pulsations in the foot. Most of the failures and those with unduly prolonged healing are in the group with no pulsation below the femoral artery. While it is obviously true that the poorer the circulation, the less chance there is of healing, success or failure cannot be determined on the basis of palpable pulsation. McKittrick and his associates emphasized that there are frequent surprises in both directions. Success or failure is probably determined by the extent of collateral circulation which has developed and there is no accepted method of determining that collateral circulation except the purely clinical. None of the objective methods has been so successful as inspection of the leg for the color and nutrition of the skin and subcutaneous tissues, palpation for warmth, and clinical experience.

Although little work has been done on the problem, there is some experimental evidence and much clinical evidence that the transmetatarsal amputation takes great advantage of the collateral circulation as it develops in the leg. Injected specimens, such as were illustrated by McKittrick and Root, as well as some of our own, suggest that there are areas where collateral circulation develops with ease and others where it is virtually impossible. It is felt that there are few, if any, collateral vessels in the toes, the dorsum of the foot, and along the anterior aspect of the leg. On the other hand, there may be many fine collateral vessels in the plantar subcutaneous tissue. When

postoperative gangrene is seen after amputations for peripheral vascular disease, it is almost always confined to the dorsum of the foot in the transmetatarsal amputations and amputations of single toes, and to the anterolateral skin flap in the below-the-knee amputation. A great part of the success of the transmetatarsal amputation is due to the use of a long plantar flap of skin and subcutaneous tissue without a dorsal flap. Likewise, the amputation is performed far enough distally so that the deep structures of the foot are not involved.

It is the authors' belief that with the material available in this study we cannot evaluate the role played by lumbar sympathectomy in the final results. The series is too small, and the records of the response to sympathectomy are too inaccurate. According to our clinical observations in this type of patient, it did not influence the final outcome. Warren and his associates reported similar observations. There was, however, no extension of gangrene which could be attributed to lumbar sympathectomy. Since there have been no complications of sympathectomy, and there has been no accurate method of preoperatively evaluating the postoperative response, the operation has been recommended whenever it was felt that any degree of response might follow. It is possible that many of the good results are in part due to increased peripheral blood supply following lumbar sympathectomy.

Sympathectomy in the past has been recommended as a means of controlling rest pain. It has been well established that in many cases of intermittent claudication the response is dramatic. In this series we were concerned, however, with persistent pain in the toes with or without an open, infected lesion. In five of these patients such pain was a major complaint and in no case did sympathectomy relieve the pain. On the other hand, all five were completely relieved following transmetatarsal amputation when the wound was completely healed. It is believed that pain in these patients is due in large part to involvement of peripheral nerves by fibrosis and acute inflammation.

From the combined experience of those who have used the transmetatarsal amputation in peripheral vascular disease it is apparent that it is

possible in a high percentage of patients to obtain well-healed stumps. In any discussion of the use of this type of amputation three specific criticisms can be made. The authors feel that these criticisms should be mentioned and discussed briefly.

First, it is believed by some that using a conservative amputation merely delays the inevitable amputation at a higher level. In the present series there were only six reamputations.

The second criticism is that many of the patients suitable for transmetatarsal amputation need only removal of the involved toes. Yet, if treatment is limited to the involved toes, several months are frequently required for complete healing. After this treatment, gangrene may at any time develop in the remaining toes, the most vulnerable part of the extremity. In such episodes it may not be possible to prevent the spread of gangrene and infection to the foot, or, therefore, to prevent a major amputation.

The third criticism is that for some patients too long a time is required for delayed healing, resulting in great economic loss and delay in rehabilitation. In this group of thirty-three amputations, there were seventeen instances of delayed healing (52 per cent of the total). In most cases the patients were ambulant and might have been outpatients after two months. In this group only five stumps have required longer than seven months to heal satisfactorily, and in each of these there was some reason for feeling that prolonged treatment was justified.

It is unfortunate that this serious disease occurs primarily in elderly people. There is always bilateral involvement and, in the event of bilateral high amputations, these patients do not successfully wear prostheses and a wheel-chair existence results.

It is the authors' impression that the more widespread use of the transmetatarsal amputation will prolong the productive lives of many patients.

Note: The authors wish to thank Mr. Earl Bartlett, medical photographer at Dearborn Veterans Hospital, who took the photographs used to illustrate this paper.

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# Acute Leukemia in Adults

## Treatment with the Combined Use of ACTH or Cortisone and 6 Mercaptopurine

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THE results of treatment of acute leukemia with 6 Mercaptopurine (6MP)\* have been analyzed by Bross,<sup>1</sup> who found that in 156 adults there were twenty-three (15 per cent) remissions. The remission rate of 36 per cent in a series of childhood patients was significantly greater. Tivey<sup>2</sup> compared the survival times of untreated adults with acute leukemia with those of a series of patients treated by Burchenal<sup>3</sup> with 6MP; the median survival time among 179 patients untreated was approximately 3.3 months from onset of symptoms to death, whereas among fifty patients treated the median survival time was over six months. Most patients with acute leukemia have been treated sequentially with various methods. The majority received ACTH, cortisone or antifolic acid derivatives at one time or another during the course of the disease. In addition, the liberal use of blood transfusions and antibiotics, whose beneficial effects are well known<sup>4</sup> was employed in most instances. However, little or no mention was made of the combined use of ACTH or cortisone and 6MP. Some authors<sup>5,6,7</sup> cite a few cases in which this combination was used, and they imply that the combination was beneficial; it was thought that one drug may potentiate the other. Since January, 1954, we have observed five instances of acute leukemia in adults in which ACTH or cortisone and 6MP were used simultaneously. It is the purpose of this communication to describe the effects of the combined therapy of acute leukemia in adults.

### Methods

All patients were adult males between the ages of nineteen and forty-six years. With the excep-

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\*6 Mercaptopurine (Purinethol) produced by Burroughs-Wellcome Company.

tion of patient No. 5, none had received anti-leukemia drugs or hormone therapy prior to admission. Two patients had received blood transfusions and antibiotics prior to admission. Two and one half mg per kg. of 6MP were given orally until a satisfactory remission or severe toxicity resulted. ACTH\*\* in a total amount of 120 USP units daily was given intramuscularly in divided doses, or cortisone was given orally in a dose of 300 mg. daily. Steroid therapy was administered in this manner for two to four days, and then the dose was decreased gradually, depending on side effects and therapeutic results. Potassium chloride and a low sodium diet were given to each patient.

### Results

Remissions were classified as clinical or hematologic remissions, according to criteria stated by others.<sup>3,5</sup> A complete hematologic remission was indicated by a return of the peripheral blood and bone marrow to a normal appearance. A satisfactory hematologic remission was defined as a return of the peripheral blood picture to normal, and with less than 25 per cent abnormal stem cells in the bone marrow. An incomplete hematologic remission was indicated by the persistence of a small percentage of abnormal stem cells in the peripheral blood and not more than 50 per cent such cells in the marrow. A clinical remission was the disappearance of toxicity, fever, and anorexia together with a decrease in the size of diseased organs, disappearance of hemorrhagic phenomena and a return of the patient's ability to engage in normal activities. Failure of therapy was characterized by absence of change in clinical or hematologic status, or the failure of therapy to bring about improvement of the degrees defined above.

The following case reports indicate the clinical and hematologic changes observed in our patients.

\*\*Acthar-gel, Armour & Co.

MARCH, 1956

# ACUTE LEUKEMIA IN ADULTS—MOYNIHAN AND BERMAN

Details of the findings in the bone marrow will be discussed separately in another communication because of their special interest.

Four of the five patients had clinical remissions.

Hematologic data (Fig. 1) showed anemia and thrombocytopenia. The initial leukocyte counts were between 30,000 and 36,000 per cu. mm., with 92 per cent undifferentiated stem cells. Bone marrow study showed a greatly elevated ratio of leukocytic elements and there

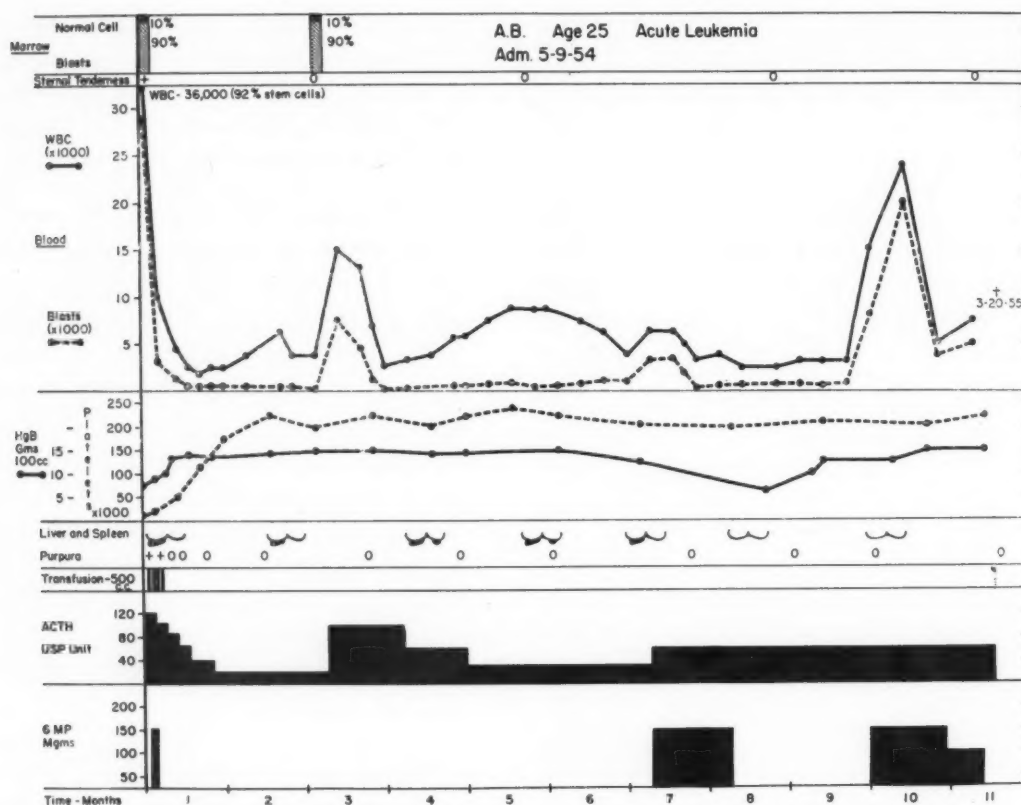


Fig. 1. Clinical and hematological course (Case 1).

Their improvement justified a release from the hospital and resumption of normal activities. Among the four patients there was a total of thirteen hematologic remissions, either complete, satisfactory, or incomplete. The life span of the five patients since onset of symptoms has been seven, eleven, fourteen, seventeen and twenty months, respectively. Three patients are still alive and well, eleven, seventeen and twenty months after the diagnosis of acute leukemia was established. One patient (Case 2) is still enjoying a complete remission twenty months after the time of diagnosis of acute leukemia. No examples of severe toxicity were encountered during treatment. The usual side effects of steroid therapy were seen but it was never necessary to decrease the dosage of the drugs.

## Case Reports

**Case 1.**—A twenty-five-year-old white man was admitted to the hospital in May, 1954, because of weakness of three months' duration. Examination revealed pallor, sternal tenderness, slight purpura and hepatomegaly.

were over 90 per cent undifferentiated stem cells. Treatment was begun with 120 USP units of ACTH and 130 mg. of 6MP daily. There was a precipitous fall in the counts of total leukocytes and stem cells within a week. The counts reached a low point of 200 per cu. mm. for the total leukocyte count and for this reason the use of 6MP was interrupted but the use of ACTH alone was continued. There was a concomitant sustained rise in hemoglobin levels and platelet counts. The patient became afebrile and gained 12 pounds. Physical findings became normal and the patient could be discharged from the hospital. A hematologic relapse occurred within three months but it was controlled by increasing the dose of ACTH. A second hematologic relapse occurred in the seventh month and this was controlled by ACTH plus 6MP. In the tenth month of the disease a third hematological relapse was observed; this also disappeared when the combined therapy with ACTH and 6MP was resumed. During the third remission the patient was readmitted with the onset of pneumonia; he expired six hours later. Autopsy revealed extensive pneumonia and leukemic masses in the middle and anterior mediastinum and extensive pericardial leukemic infiltrations.

**Comment.**—This case represents an excellent temporary clinical remission of acute leukemia and a con-

# ACUTE LEUKEMIA IN ADULTS—MOYNIHAN AND BERMAN

tinuous incomplete hematologic remission with three distinct relapses which were controlled by the combined therapy.

*Case 2.*—A thirty-one-year-old white man was admitted in February, 1954, with pneumonitis of the lower

*Case 3.*—A forty-three-year-old white man was admitted to the hospital in February, 1954, with anemia, fever, enlarged cervical lymph nodes, severe generalized purpura, bleeding gums, and ulcers in the oral region. A diagnosis of acute monocytic leukemia of the Naegeli

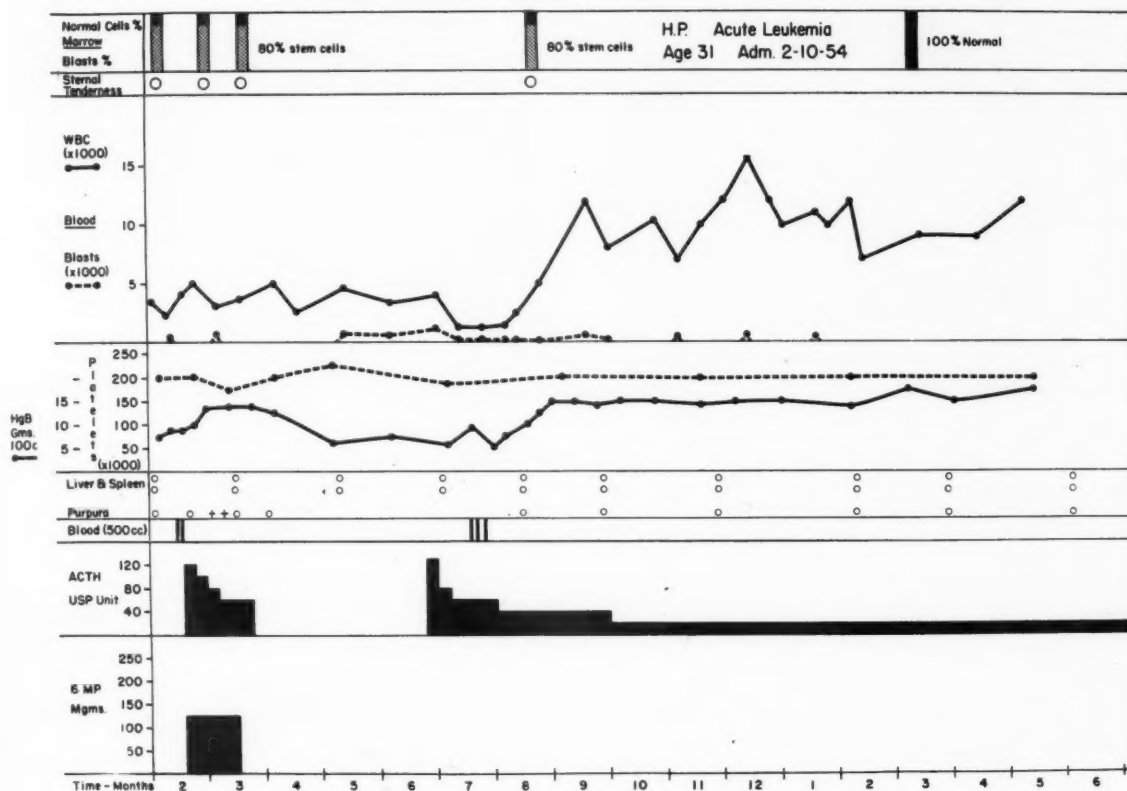


Fig. 2. Clinical and hematological course (Case 2).

lobe of the left lung. He recovered rapidly with penicillin therapy but had been found to have leukopenia and anemia when he was admitted. There were no abnormal cells in the peripheral blood but the bone marrow smears contained 80 per cent undifferentiated stem cells. Treatment was begun with ACTH and 6MP. There was a sustained rise in hemoglobin and a return of leukocyte counts to normal levels (Fig. 2). A few stem cells appeared in the peripheral blood. After one month the patient could be discharged from the hospital. A hematologic relapse occurred in the sixth month of the disease. At this time ACTH therapy was resumed in full dosage of 40 mg. every six hours. After a short course, the dose was gradually decreased after which there was a steadily improving hematological response. At the time of this writing, twenty months later, the patient remains in complete clinical and hematologic remission.

*Comment.*—This is an instance of acute leukemia in which there was a rapid response to combined therapy with ACTH and 6MP. One hematological relapse was easily controlled by ACTH. Fifteen months after the diagnosis of acute leukemia was established the bone marrow appeared normal. Up to now the excellent clinical remission has persisted for twenty months.

type was established. Surprisingly, the patient had experienced a complete clinical and hematologic remission following a course of nitrogen mustard therapy (28 mg. over a period of four days). The patient was discharged and followed in the out-patient clinic. Nine months after the diagnosis was made it was noted that there was an increase of monocytes in the peripheral blood; a month later monoblasts and myeloblasts appeared. A second course of treatment with nitrogen mustard had no effect. During the next month anemia recurred; this was followed by thrombocytopenia, weight loss and the appearance of ulcerative lesions in the mouth. The leukocyte count began to rise and there was a concomitant increase of stem cells to levels of 15,000 to 20,000 per cu. mm. At this point the patient was treated with 6MP alone. This resulted in partial hematologic and clinical remissions (Fig. 3). He was not given ACTH because of a quiescent infiltration in the apex of the left lung. Bilateral sinusitis associated with Ludwig's angina occurred in the fifteenth month of his disease and he was readmitted for therapy. The patient's condition appeared terminal; there was a leukocyte count of 77,000 per cu. mm. with 90 per cent monocytoid stem cells. Treatment included 6MP, Cortone†, blood trans-

†Cortone (Cortisone acetate) Sharp & Dohme Co.

# ACUTE LEUKEMIA IN ADULTS—MOYNIHAN AND BERMAN

fusions and antibiotics. Within three weeks there was an excellent clinical recovery. Hemoglobin levels and platelet counts increased and the leukocyte count decreased to 10,000 per cu. mm. with 5 per cent stem cells.

of the poor condition of the patient. After three weeks of combined therapy there was marked improvement in the clinical picture. There was increased appetite with weight gain, decrease in the extent of the necrotic

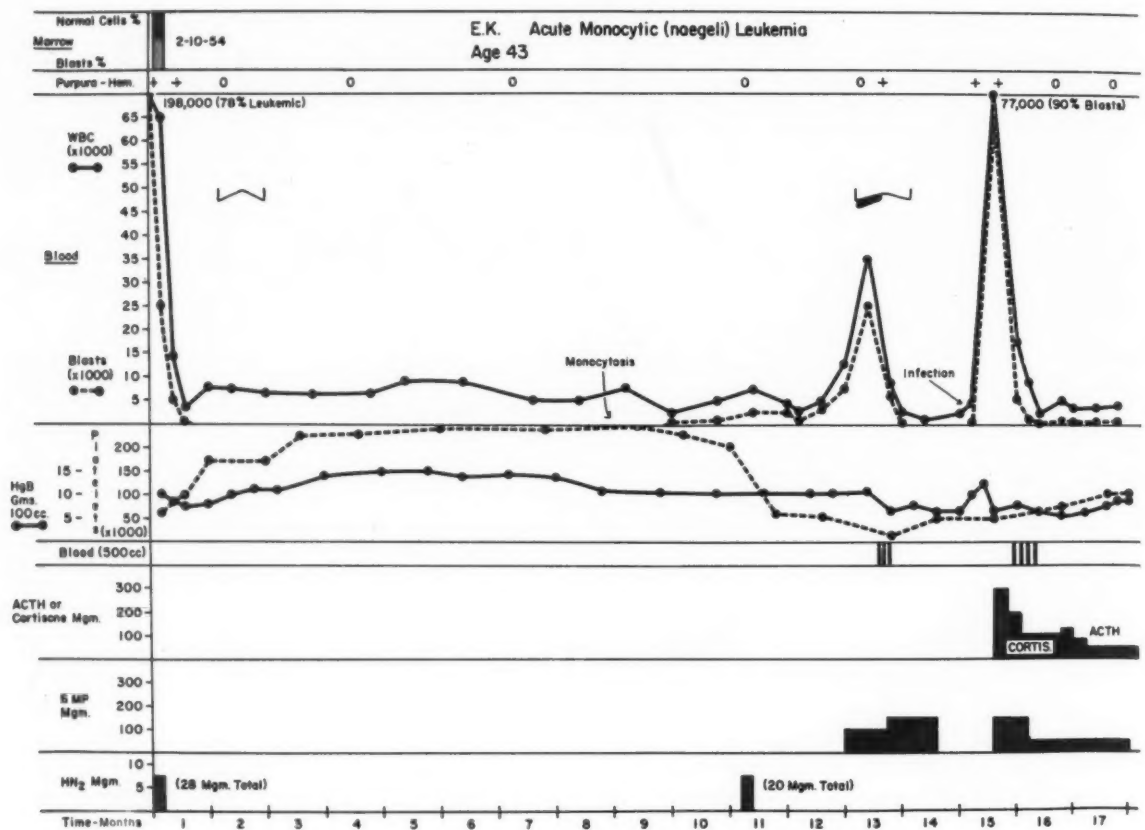


Fig. 3. Clinical and hematological course (Case 3).

The patient was then in a satisfactory hematologic remission, eighteen months after diagnosis.

*Comment.*—A patient with acute monocytic leukemia which is usually refractory to most forms of therapy made a surprising remission following treatment with nitrogen mustard but later failed to respond to a second course. He experienced a partial short remission after treatment with 6MP alone and later experienced a satisfactory remission with combined therapy (6MP plus Cortone).

*Case 4.*—A twenty-five-year-old service man became ill with pharyngitis and enlarged left cervical lymph nodes while on duty in Korea in January, 1954. He was found to have anemia, thrombocytopenia and a leukocyte count of 40,000 per cu. mm. About 50 per cent of the cells in the blood were designated as "blast cells." The patient appeared at our hospital three months later. He had not received therapy other than blood transfusions. Examination revealed pallor, small ulcerative oral lesions, a huge necrotic infiltrative lesion in the left periorbital area (Fig. 4) and another similar lesion on the right leg. There was no thrombocytopenia. Treatment was begun with 6MP alone but combined therapy with the addition of ACTH was soon instituted because

infiltrative lesions (Fig. 5) and this was accompanied by rapid improvement in the hematologic status (Fig. 6).

*Comment.*—A patient with acute leukemia with extensive skin involvement progressed slowly toward a remission after treatment with 6MP alone. Combined therapy resulted in a more rapid clinical remission. The hematologic picture to date can be classified as an incomplete remission.

*Case 5.*—A nineteen-year-old service man was hospitalized because of fever, epistaxis and enlarged cervical lymph nodes. In a service hospital it was found that the patient had anemia, thrombocytopenia and an acute leukemia blood picture. There were 80 per cent stem cells in the peripheral blood. The patient was treated with cortisone and blood transfusions with slight improvement of the anemia, but the leukemic picture became worse, i.e., there was an increase of stem cells. Three months later he was transferred to our hospital. At this time the patient had enlarged cervical and inguinal lymph nodes, hepatomegaly, sternal tenderness, and pallor. Bone marrow study showed 92 per cent stem cells, mostly of a lymphocytoid variety. Administration of 150 to 200 mg. of Cortone daily was continued and 6MP was added in doses of 125 mg. daily. There was

# ACUTE LEUKEMIA IN ADULTS—MOYNIHAN AND BERMAN

an improvement in the peripheral blood picture; the stem cells decreased in number. The clinical course became progressively worse and was characterized by repeated epistaxis and enlargement of the spleen. Acthar-

impression that four of the five patients experienced more rapid and more prolonged remissions than we have observed previously with other



Fig. 4. Appearance of infiltrative lesion of left periorbital region on admission to the hospital (Case 4).



Fig. 5. Appearance of infiltrative lesion of left periorbital region after treatment (Case 4).

gel was substituted for Cortone without clinical effect and the patient expired six months after the diagnosis of acute leukemia was established.

*Comment.*—This represents an example of acute leukemia, probably of lymphocytic type, which was not affected by combined therapy with 6MP and ACTH or cortisone. There was an incomplete hematologic response shortly before death.

## Discussion

The beneficial effects of 6MP, ACTH and cortisone in the treatment of acute leukemia in some adults have been reported.<sup>3,5,6,8,9,10</sup> In most instances these agents were used singly or sequentially during the course of the disease. As a patient became refractory to one, another drug was used in the hope of obtaining a second remission. It has been stated that remissions of acute leukemia of adults who have been treated with steroids or 6MP have been of short duration.<sup>3,5</sup> It has been pointed out that the action of 6MP is unfavorably slow, requiring periods of three to eight weeks for practical effects to take place.<sup>5</sup> In the hope of overcoming these limitations we have employed a combined therapeutic regime of steroids and 6MP for acute leukemia of adults. As seen from the case descriptions, our patients were gravely ill at the time treatment was instituted. It is our

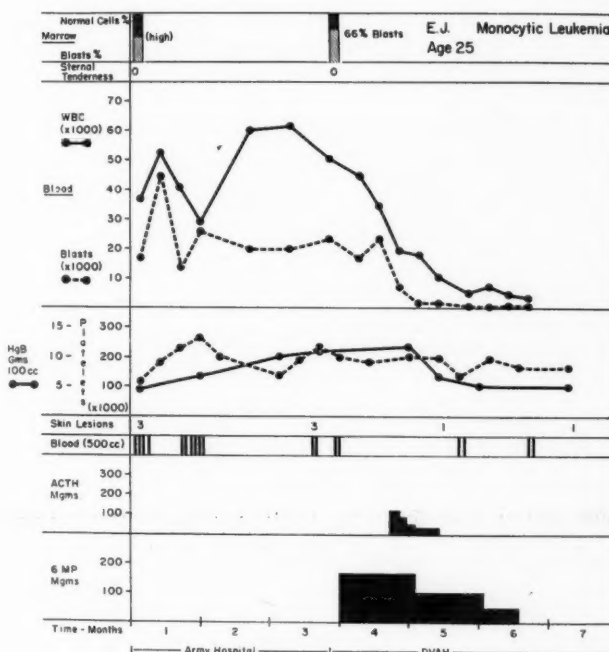


Fig. 6. Clinical and hematological course (Case 4).

forms of treatment. When favorable results occurred, there was rapid control of purpura, fever, anorexia and general debility within one to three days. The prompt effects are probably related to the steroid therapy, whereas the subsequent pro-

longed hematologic effects may be related more to the effect of 6MP. In four instances decrease or disappearance of stem cells and improvement of anemia appeared more rapidly than would be expected from the use of 6MP alone. Remissions in most instances were prolonged and one patient is still in complete hematologic and clinical remission after nearly two years. The median survival time of thirteen months in the five patients, including the one who is still in excellent remission, is at least a favorable manifestation of therapeutic results in the treatment of acute leukemia of adults.

### Summary

1. Five adults with acute leukemia were treated with a combination of ACTH or cortisone, and 6MP, each in full dosage.

2. The treatment was well tolerated and in no instances was there any need to discontinue treatment because of toxic effects.

3. Four of the five patients experienced complete clinical remissions. Four patients had a total of thirteen complete, satisfactory, or incomplete hematologic remissions.

4. The remissions appeared to be more sustained than would be expected had each drug been employed alone.

5. Three patients have survived for ten months, seventeen months, and twenty months, respectively, after the diagnosis was established. At the time of this report these patients are still living.

6. The combination of ACTH or cortisone, plus 6MP for the treatment of acute leukemias of adults may be more effected than treatment with either of these agents alone.

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## PIGMENTED SKIN LESIONS

(Continued from Page 304)

5. The melanocytes remain constant as to number and morphology. Depigmentation is due to temporary interference with melanin formation and gradual shedding of preformed pigment.

### Acknowledgments

Consultation and helpful suggestions given by Dr. Hermann Pinkus of the Department of Dermatology are gratefully acknowledged. Dr. Renato Staricco, Fellow in the Department, prepared the histologic specimens.

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## Why the \$10 Assessment?

Two reasons for this year's assessment were given by the 1955 House of Delegates: (a) to bolster the Society's General Fund; and (b) to build a necessary reserve for an emergency such as faced Medicine in 1948 (Wagner-Murray-Dingelism).

In recent years, the Society's expanding program markedly increased the expenditures in the General Fund (which includes Administration and General, Society Activities, and Committee Expense). MSMS is primarily a service organization; more services require more money. For two years, 1952 and 1954, the General Fund ran in the red. In 1955, the General Fund ended in the black (\$4,100) only because The Council allocated \$5.00 of every member's dues from the Public Relations account to the red-faced General Fund. In 1955, Public Relations ran on \$15.00 per member only by postponing several important and approved projects. This—in the face of constant attacks being made against the medical profession—is poor business. Socialized medicine is NOT dead; we are still surrounded by those who would substitute it for our time-tried method of private medicine from which the glories and achievements of Medicine have come.

The 1956 budget allocates \$28.50 of each member's dues and assessment to the General Fund, \$6.25 to Public Education, \$3.50 to Public Service, \$5.25 to Professional Relations, \$5.00 to Public Education Reserve and the balance to Building Fund (\$2.00), Journal (\$1.50), and Contingent Fund (\$3.00).

The Council anticipates that several major projects, delayed in 1954 and 1955 for lack of funds, can be completed in the current year. The reserves for public education will reach approximately \$55,000 by the end of 1956—which is a surplus not adequate, however, to win a major battle (almost \$100,000 was necessary the last time).

A reserve sufficient to continue operations for *two years*, without a cent of revenue being received, is recommended by wise fiscal counselors as good financing for an association such as the Michigan State Medical Society. Some medical societies have reached that safe status. But even with this year's \$10.00 assessment, the MSMS funds are far from that goal.

## President's



## Message

*W.B. Jones.*

*President, Michigan State Medical Society*

P.S.: Peruse the Auditor's Report and the Budgets in this number.

# Editorial

## DEDICATION

We take great pleasure in dedicating this March number of *THE JOURNAL* to Wayne University College of Medicine, not because there is a particular anniversary, but because the Publication Committee and the Council recognize that Wayne University College of Medicine is serving a tremendous need in medical education in the State of Michigan.

Within the near future, Wayne University will no doubt become a state institution. A bill to accomplish this purpose has already been introduced in Lansing.

In this issue of *THE JOURNAL*, we are presenting a group of especially prepared articles which well illustrate the advanced research work being done at this school.

## THE PRESIDENT'S HEALTH PROGRAM

President Eisenhower, on January 26, 1956, presented to Congress his annual Health Program for the nation. He proposed a substantial increase of Federal funds for medical research. "Progress in medicine," he said, "is dependent on research. Antibiotics in ten years have reduced appendicitis 69 per cent, rheumatic fever 66 per cent, and polio in only one year has materially decreased in its threat to our children." He recommends \$126,525,000.00 for the National Institute of Health (a 28 per cent increase) of which he suggests special amounts for cancer, heart disease, mental illness, arthritis and metabolic disease, neurology and blindness, infectious and parasitic disease, and dental disorders.

"The bulk of medical research is conducted in laboratories of universities, hospitals and other institutions outside of the Federal Government," therefore he proposes a five-year grant for construction amounting to \$250,000,000.00 "to assist in construction of research and teaching facilities in schools of medicine, osteopathy, public health, and dentistry and other research institutions. These institutions would be required to supply at least equal amounts in matching funds."

### Health Personnel

"The rate at which physicians are being graduated from the Nation's medical schools is barely keeping pace with the increase in population. There are serious shortages in such fields as psychiatry, pediatrics, and in

physical medicine and rehabilitation. The program of construction grants for medical research and teaching facilities also offers the opportunity for medical, dental and other professional schools to expand their student capacity and provide for the training of more physicians, scientists, dentists, and other health workers."

## Meeting the Costs of Medical Care

Since World War II, the costs of medical care have been increasingly met through voluntary health insurance. More than 100 million persons are now enrolled in prepayment health insurance plans of some type. But health insurance coverage is still not available to many who need it, and the character and amount of insurance protection in important respects remains inadequate.

"Health insurance protection must be more available to older persons, and those living in rural areas, to the self employed and those working in small organizations who cannot be reached by ordinary group enrollment."

In Michigan, small groups with as few as five persons, are eligible for enrollment. Persons up to sixty-five are eligible in the community enrollments which are held each year. Oldsters in groups are taken regardless of age and Michigan Hospital Service and Michigan Medical Service have a great number of Grange and other rural groups enrolled. Many more could be accommodated. The community enrollment periods held each year are especially for the self-employed.

The President proceeds:

"The need for more and better health insurance coverage can best be met by building on what many of our people have already provided for themselves—the voluntary health prepayment plans. Much can be done to encourage more rapid expansion and improvement of such plans."

## Reinsurance

"Last year and the year before, I urged the enactment of a proposal of Federal reinsurance to encourage increased protection against the costs of medical care through voluntary prepayment plans. Since the legislation was introduced, private insurance organizations have developed new types of policies, and prepayment plans have extended coverage to groups formerly unprotected. There are now indications that organizations writing health prepayment plans might progress more rapidly by

JMSMS

## EDITORIAL

joining together—sharing or pooling their risks—in fields of special needs. The Administration is considering legislative proposals that would permit such pooling, but, if practical and useful methods cannot be developed along these lines, then I will again urge enactment of the proposal made last year."

### Dependents

Illness and disability are among the principal problems of public assistance recipients, and are major causes of dependency. Therefore I again recommend that the Congress authorize a separate program through which the Federal Government would match funds expended by the States and localities for medical care for the indigent aged, the blind, the permanently and totally disabled, and dependent children.

"Additionally, I renew my previous recommendation for (a) providing Federal employes with the benefits of group health insurance, and (b) the improvement of medical care for the dependents of service men."

Obstacles to carrying out some of the President's proposals have been mentioned before and suggestions made to relieve them. The Post Office employes in Michigan would have been covered many years ago if the Government had allowed withholding privileges. The allotments to Blue Cross-Blue Shield, or even to Community Funds were prohibited. A minor Congressional amendment would correct that.

Some years ago, the Michigan Department of Social Welfare wished to care for the old age assistance, aid to blind, and dependent children, in a more satisfactory way than now prevails. Until now, allotments for medical care were made by adding a few dollars to the recipient's monthly check. He was *expected* to pay the doctor. The Department was concerned that many did not get the allocated treatment. Calhoun County was ready to accept what was then being expended, and distribute it to the doctors through the medium of Michigan Medical Service. We believed there would be more than enough to pay for all services actually rendered. The Federal Government vetoed the plan because the Michigan Department of Social Welfare cannot legally pay to the doctor or his representative. It must go through the patient. Correction of this quirk of usage would help in rendering medical care to the very people that interest the President.

Care of dependents of the service men can easily be done in the same way as the present Home Town Care of Veterans with service-connected disabilities. Negotiations are now in process to end that.

### SOCIAL SECURITY

Again the problem of whether the medical profession should be included in the OASI must be considered. The House of Delegates of the Michigan State Medical Society in September, 1955, instructed all the county medical societies to take a poll of their membership to determine sentiment for inclusion in Federal Social Security. It is hoped this directive of the House of Delegates will be carried out in an endeavor to discover the actual feelings of the membership.

The American Medical Association has frowned upon the OASI and to date has succeeded in keeping our groups out of the compulsorily included list. There are a few (ministers, farmers) who may choose, but once having made their choice there is no return. It has been suggested that the medical profession be included as voluntary participants. The AMA has published statements to the effect that one could provide, better and more cheaply, the same benefits Social Security gives. Repeatedly the Administration, and especially the Department of Health, Education and Welfare, has hoped the medical profession would be made part of the whole program, but this year that is not in the President's expressed wishes, as given to Congress.

In order to give our members more complete data upon which to make a decision, the Editor has requested from a licensed insurance counsellor, a summarization of the pros and cons, giving an analysis and comparison of both private insurance and the OASI. The study is on page 358 of this number of *THE JOURNAL*. The Social Security representatives in Battle Creek were much interested when shown the study.

### MEDICAL CARE AND RECORDS

Since December, 1950, the Michigan State Medical Society has been represented on a Medical Advisory Committee serving the State Department of Social Welfare. Other groups represented on the committee are the State Dental Society and the State Association of Osteopathic Physicians and Surgeons.

One of the functions of the Social Welfare Department is to assist in providing medical care for public assistance recipients. Medical care is defined as home or office treatment by licensed medical practitioners, and the Social Welfare Act provides that the private physician-patient relation-

## EDITORIAL

ship shall be maintained. The agency's role is to provide an allowance for medical care in the grant of old age assistance, aid to the blind, aid to the disabled, or aid to dependent children. The client chooses his own physician and makes his own arrangements for care and payment.

Currently these assistance programs are serving some 143,000 persons, including both children and adults, throughout Michigan. Financing is by appropriations from the state general fund, with federal participation through grants-in-aid to the state.

Allowances for *chronic medical care* (i.e., in which the need for treatment will continue for three months or longer) may be included in the assistance grant only upon certification by the physician. (The blanks used for this report—Form SB-54, Verification of Need for Medical Care, have just been radically revised with the advice of Medical Advisory Committee. For clients who are not certified for chronic medical care, the grant may include a non-chronic medical allowance of \$2.00 a month (will be raised to \$3.00 a month beginning April, 1956) except for persons hospitalized or receiving convalescent care.

One of the most common faults in medical procedures is the inadequate or incomplete listing of medical diagnoses and medical services. The reports mentioned above, for example, go to the local bureau of social aid medical advisor, sometimes to the state medical advisor, to determine the need for medical care, the period of time required, and the estimated cost. The first important item is "Diagnosis." If the diagnosis is specific, with proper nomenclature, and with sufficient description to give the medical advisor a clear picture, the first duty of the examining physicians is complete. (Read over your next report and see if you could determine the exact condition sufficient to warrant allotment of funds for medical care.) From this report the advisor allots money which is paid to the patient each month, which he in turn is supposed to pay to the doctor. This may seem to be a cumbersome method, but it is required by state and federal law. However, direct payment to the doctor may be made for special diagnostic examinations, such as those for determining disability of the father in aid to dependent children cases, when authorized by the county bureau of social aid.

For several years the Social Welfare Department has been experimenting with a method for de-

termining the chronic medical needs of public assistance clients on an "actual cost" basis. This method is now standard practice in fifty-five county bureaus of social aid, and by recent action of the Social Welfare Commission will be put into effect statewide beginning in April. This plan has proved less expensive in terms of the amounts included for medical care in assistance grants, yet it is believed the clients actually receive more medical care.

The "estimated cost" procedure still used in the other twenty-eight counties requires the client to get a new medical statement from the doctor at the expiration of the period originally indicated as the approximate length of time treatment would be required. Under the actual cost plan, these "renewals" are unnecessary. The patient merely keeps a record of his actual medical expenses on a blank furnished by the bureau for this purpose. This form, called SB-54A—Report of Medical Expenses, is to be signed by the doctor or other person in his office authorized to do so each time medical service is given. The doctor also lists on the form any drugs or other medical supplies which the patient must buy at the drug store. The pharmacist signs the form when such purchases are made at this store. These records are accumulated and turned in to the bureau each three months, at which time the medical allowance is reviewed and the future assistance grant adjusted on the basis of the actual cost report. After two three-month periods of reporting by the client, if the average monthly cost has stabilized—that is, if there is a difference not exceeding \$5.00 (up or down) between the first and second period averages, the next reporting period may be extended to six months.

No adjustment in grant for changes in medical expenses can be made during the reporting period, unless there is such a marked change in the medical needs that a "new start" is necessary. It is only when a "new start" is essential that the patient must secure a current medical statement and estimate of future cost from his doctor.

The Department wishes the recipients to get (within legal limits) all the medical care needed. This reporting and cost reporting will assure the patient's going for and getting his care. It is hoped also to eliminate the many who may get allotments and never go back to the doctor until another allotment is needed, but who has used the money for other than medical care. All of these

## EDITORIAL

patients will be able to get incidental medical care because each one is automatically paid \$3.00 a month for miscellaneous medical care.

The basic need is the complete and well-stated diagnosis, including an estimate of the amount of care and length of care. This latter can be checked. What we have said about complete and accurate diagnosis also holds true in making reports to Michigan Medical Service. All medical and surgical reports go to a receiving desk where 70 per cent are automatically paid by clerks who know nothing about medicine. Seventy per cent of our doctors are making proper reports of services, but what about the other 30 per cent? Their reports have to be studied by specially trained personnel and then sent to the medical director. If he does not have sufficient information to make a determination, the Medical Advisory Committee gets the job; they spend many hours trying to interpret the report and frequently return it for clarification to the doctor who originally filled out the blank. Just a little more care is needed and an extra minute to reread the report with the question in mind, "Could I pass upon this information?"

If all our doctors, when making hospital records as well as medical reports, would follow through on this suggestion, we know the Hospital Records Committees would call them "Blessed," and we believe the question of accreditation might be much easier.

It used to be that medical record making was never mentioned in undergraduate schools, but in later years medical students should have absorbed sufficient "know-how." The American Medical Association has recently adopted a medical nomenclature and is holding instruction meetings in various far-away places. Michigan Medical Service, and the Michigan State Medical Society, however, have published a Fee Schedule for Government Agencies containing a satisfactory nomenclature with key numbers. One or two extra minutes of the doctor's time would save many headaches and much expense in at least three divisions of medical service.

That ordinarily safe therapeutic doses of morphine may be fatal in persons who are intoxicated was shown in 1952 by K. Möller (Copenhagen). At that time, he had recorded seven cases in which death followed the administration of therapeutic doses of morphine to patients with blood alcohol concentrations between 0.22 and 0.27 per cent—in themselves not at all dangerous. Möller assumed that there is an additive action of alcohol with morphine. He therefore warned against giving morphine or its derivatives to intoxicated patients.

## MICHIGAN FEDERATED UNION MEDICAL PLAN

In the section, You and Your Business, page 236, is an item from one of several newspapers of Sunday, February 5, 1956, announcing a movement by Union officials to establish their own medical and hospital service plans. This is not a new threat. The Union leaders have used it many times in negotiations and conferences. The most recent was at the Michigan Hospital Service Board meeting which authorized the request for increased rates. Later, the Hospital Service Board and Michigan Medical Service Board at a joint meeting were told by these labor representatives that hospitals are making no effort to hold down costs; doctors are actually to be blamed for over-utilization because they send patients to and from hospitals; the medical plan is deficient in that it does not include diagnostic and preventive medicine and ambulatory home, office or out-patient hospital care.

All this is promised in the new Union plan. It offers complete hospital, medical and surgical care, the same as the do-gooders, labor administrators, Truman and Ewing were hoping to establish by a "National Compulsory Health Insurance." Truman says the greatest regret of his life is that he could not adopt what "*the doctors mistakenly called Socialized Medicine.*" During the negotiations and hearings regarding the recent rate increase for MHS, the labor hierarchy, by resolution and speech, made clear their ambition and determination to secure for the nation complete hospital and medical care "at no expense to the recipients."

The news item states that \$10,000 has been subscribed to formulate the new corporation. Evidently this is not to be an insurance company which would call for \$200,000 capital. It must be planned therefore to incorporate under the enabling acts sponsored by the Michigan State Medical Society in 1939 (N.P.A. 108, 1939). That act contains this paragraph:

"Section 8. The board of directors of a non-profit medical care corporation shall have representatives of the public and the medical profession of the state: provided that a majority of the directors shall be at all times, persons approved by the officers of the medical profession duly organized to promote statewide the science and art of medicine."

(Continued on Page 364)

# Wayne University College of Medicine

## Postgraduate Continuation Courses

March 12-June 9, 1956

These courses are open to all qualified persons.  
Veterans receiving benefits under the G.I. Bill should contact Dr. Arthur Johnson, Veterans Administrator at Wayne University, 666 Student Center Building, 5050 Cass.  
Registration for these courses should be made in the office of Postgraduate Medical Education at the College of Medicine, 1401 Rivard.

ANATOMY			
Regional Anatomy			
Thorax, Abdomen & Pelvis	College of Medicine	Wed. 1-5	\$50.00
Back and Extremities	College of Medicine	Thur. 1-5	\$50.00
Head and Neck (Open to Dentists)	College of Medicine	Fri. 1-5	\$50.00
MICROBIOLOGY			
Parasitology and Medical Entomology	College of Medicine	Mon. Wed. 1-5	\$50.00
Microbiology Seminar	College of Medicine	Thur. 3-4	\$15.00
PHYSIOLOGICAL CHEMISTRY			
Quantitative Methods and Metabolism	College of Medicine	Tu. Wed. Thur. Fri. 8-12	\$50.00
Nutrition	College of Medicine	Mon. Wed. Fri. 11-12	\$35.00
Survey of Medical Chemistry	College of Medicine	Thur. 4-5	\$15.00
P. Chemistry Seminar	College of Medicine	Wed. 2:30-3:30	\$15.00
PHYSIOLOGY AND PHARMACOLOGY			
Physio. & Pharm. Seminar	College of Medicine	Tues. 4-5	\$15.00
PATHOLOGY			
Pathology of Neoplasms	College of Medicine	Wed. 1-5	\$50.00
DERMATOLOGY			
Seminar in Dermatology	Receiving Hospital	Wed. 10-12	\$15.00
Dermopathology Seminar	Receiving Hospital	Wed. 1-2	\$15.00
INTERNAL MEDICINE			
Gastroenterology Clinic	Receiving Hospital 243 Farwell Annex	Sat. 8-9 a.m.	\$15.00
Medical X-Ray Conference	Receiving Hospital 243 Farwell Annex	1st, 2nd, 3rd, 5th Tu. 11-12	\$15.00
Medical Pathologic Conference	Receiving Hospital 243 Farwell Annex	Wed. 11-12	\$15.00
ONCOLOGY			
Cancer Detection	Yates Clinic	Wed. 3-5	\$25.00
PSYCHIATRY			
Psychoanalytic Psychiatry	Receiving Hospital 201 Farwell Annex	To be arranged	\$15.00
Seminar in Psychiatry	Receiving Hospital 201 Farwell Annex	To be arranged	\$15.00
SURGERY			
Surgery Seminar	645 Mullett, 4th Fl.	Mon. 4-5	\$15.00

# Michigan's Foremost Family Physician

## A Tribute

It is almost impossible to condense the many-faceted life of Walter H. Winchester into a profile. If it were necessary to sum up the man in just one line, I think it would have to be said that he is a man of many pursuits and does everything he undertakes with exceptional skill.

Some might want to look for the source of an inner drive or compulsion that he keeps this man so active and adept at eighty-one years of age. But I think he just gets a lot of fun out of living and doing things. He loves to hunt and fish for his own personal satisfaction and not for the glory of showing off his catch. He never parades his medical statistics before his colleagues, but is utterly content to see his patients get well and know the inner content of a job well done. In short, he is modest and humble.

If I ever knew a doctor who could be called a "general specialist," it would be Dr. Winchester.

And the remarkable thing to remember is that so much of today's modern practice has come about since he left medical school, which more or less makes him an Abe Lincoln who learned his lesson the well-known "hard way." From tonsils to fractures, from cholecystectomies to deliveries, from tracheotomies to pneumothorax—Walter has done almost everything that there is to do in medicine with meticulous skill.

To go with his technical ability, we find a warm personality and a generous approach to the troubles of people. He has dark, piercing eyes made kindly by a crinkle at the corners that goes

with a look of perpetual interest and amusement. He is a man who would instinctively catch your interest and one you would immediately trust.

He must be a man of great self-discipline. Perhaps this is one of the most important ingredients of his many skills and accomplishments. He will force himself each fall to use the eleven

flights of stairs at Hurley Hospital rather than the elevator so that he will be in condition for hunting. He is a great student of the classics. Now, maybe he hasn't had to force himself to study these, but if Walter made up his mind to do it, I'm sure he could discipline himself to read half the books in the Library of Congress.

To know Walter is to feel a new zest for life. He lives each day to the fullest and always looks forward to even better tomorrows. His own motto is, "Never look back, something might be catching up with you." We who know him well realize how

truly his own life of activity and accomplishment exemplifies his adherence to this motto.

At a testimonial luncheon in his honor (Detroit, March 8, 1956), a scroll of appreciation was presented to Dr. Winchester by the Michigan State Medical Society. A quotation from this highly illuminated parchment epitomizes the life-work of Walter H. Winchester, M.D.: "For valued service rendered to the health of the people of Michigan in more than a half century of practice and for constant constructive effort to improve the profession."

—JACKSON E. LIVESAY, M.D.



Doctor Winchester interviewing a patient at the County Hospital which is under his direction. He has full responsibility for the medical care of the county patients there.

## Jean Pearson

### Science Writer, Pilot, Student, Housewife—Her Talents Are Many

*The Detroit Free Press received the MSMS Award for Excellence in Medical Reporting at the 1956 Michigan Clinical Institute, with a supporting award going to Jean Pearson, Free Press reporter primarily responsible for science and medical news. Following is a personal sketch of Mrs. Pearson written especially for JMSMS by a fellow-member of the Free Press staff.*

Aside from weather, babies and pets there are very few news stories more closely read than those relating to health.

People follow their aches and pains very carefully. They want to know the latest information concerning heart disease. They want to read about new treatments for hay fever. They like to follow the progress of cancer research, new developments in polio therapy. They are fascinated with any information that pertains to their livers and lights.

But newspaper coverage of medical events is very difficult. Technical terms must be translated into every day English in a fashion which will satisfy the doctors, and still result in a readable story.

Equally as pressing is the necessity a newspaper encounters daily of picking out events of real significance in the medical world, and avoiding entanglement with issues of doubtful importance.

Fortunately for the *Free Press* and its readers, the *Free Press* staff includes a writer with excellent background and inclination for the type of medical coverage the *Free Press* likes to provide.

Jean Pearson is a veteran newspaper woman with a wide range of scientific interests.

Among her assignments in the medical field are

the coverage of major medical meetings in the state, so that *Free Press* subscribers will receive the latest developments of the field in language they can understand.

Jean has been a key figure in the setting up of the *Free Press* medical forums, at which recognized leaders in various medical specialties have publicly discussed medical problems and solutions.

Jean also has handled many *Free Press* drives to enlist public support of medical programs—heart, polio, mental health, cancer, multiple sclerosis.

Jean has constantly sought to gain the confidence of the scientists. We believe that by now they feel that their work is being accurately presented, without too much gee whiz, or arousing of false hopes among people with serious medical problems.

Jean is a familiar figure by now wherever doctors gather—a tall, serene blond girl who can talk their language.

Jean attended the University of Michigan and obtained her bachelor's degree from Wayne University. She is constantly returning to school during her spare time, and is currently studying general and industrial psychology, of evenings, and semantics whenever time permits.

As a youngster at home Jean had her own microscope and spent a lot of time peering at bugs, plant lice and whatever else aroused her curiosity.

She took heavy doses of chemistry, physiology, zoology (frogs, grasshoppers), general science, psychology, along with other university subjects.

She raised white mice, chameleons, turtles, dogs and canaries, but no cats.

It is known that she once raised an alligator at



## JEAN PEARSON

the family home, although to what size nobody is quite sure.

During summer vacation trips Jean visited the Atlantic sea coast with her family and splashed about on the tide flats looking for starfish and sea urchins for her collections.

Jean never was much of a girl for pouring tea at doll parties. She made model airplanes, owned a B-B gun and played football with the neighborhood lads, asking no quarter and giving none.

Flying always intrigued Our Girl Jean. She had her first ride, like thousands of other Americans, in a Ford tri-motor, and started flying in 1940.

Early in World War II, she enlisted in the WASP ferry command and underwent Army Air Force flight training in Texas.

She was assigned to the Second Ferrying Division at the conclusion of her training and wound up on temporary detached duty at Camp Davis, N. C.

Among her wartime tasks was serving with a tow target squadron, and teaching radar-tracking of 40 and 90 millimeter anti-aircraft guns.

Later in the war, Jean transferred to the Navy and was commissioned in 1944 after attending midshipmen's school at Smith College.

She finished out the war writing technical articles for the Deputy Chief of Naval Operations at the aviation training division in Washington, D. C.

Jean is still quite "shook up" by flying and Lieutenant Pearson Ma'am can be found at the gatherings of the naval reserve helicopter squadron at Grosse Ile, to which she is assigned.

Jean works out her vacation schedule so she can participate yearly in the cross-country Powder Puff Derby, an air race for women pilots. She has flown in the Derby three years, now.

Besides her writing, flying and studying, Jean also is a busy housewife.

She is married to Morton C. Pearson, an attorney and assistant to the Wayne County Friend of the Court. Mr. Pearson is a lieutenant colonel in the 70th Infantry Reserve Division.

It is Mort's theory that the only way to stop Jean from continuing her postgraduate studies is to burn down Wayne University.

It is the feeling of the *Free Press* that the progress of medicine can obtain increasing benefit from close co-operation with press and public and that Jean is just the girl to continue getting the messages across.

—LOUIS COOK

## MATERNAL DEATHS

(Continued from Page 298)

fatigued primigravidae will deliver spontaneously. Only rarely do we have any difficulty in persuading either private or indigent patients to accept pudendal nerve block or local anesthesia for delivery of their infants.

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1401 Rivard St., Detroit 7

# Michigan State Medical Society

## Annual Session of the Council

Detroit, January 26-27, 1956

### HIGHLIGHTS

- The Auditors' report for the year 1955 and the budgets for 1956 were approved (see pages 332-336).
- Annual reports of the Secretary and Editor were presented and approved.
- Reports of the three standing committees of The Council (County Societies, Finance, Publication), meetings of January 25, 1956, were accepted.
- Secretary L. Fernald Foster, M.D., Bay City; Treasurer Wm. A. Hyland, M.D., Grand Rapids; Editor Wilfrid Haughey, M.D., Battle Creek, were re-elected for 1956.



THE MSMS COUNCIL—1956

Top row: H. H. Hiscock, M.D., Flint; William Bromme, M.D., Detroit; G. T. McKean, M.D., T. P. Wickliffe, M.D., Calumet; K. H. Johnson, M.D., Lansing; L. C. Harvie, M.D., Saginaw, and B. T. Montgomery, M.D., Sault Ste. Marie.

Middle row: B. M. Harris, M.D., Ypsilanti; A. E. Schiller, M.D., Detroit; R. H. Baker, M.D., Pontiac; G. W. Slagle, M.D., Battle Creek; O. B. McGillicuddy, M.D., Lansing; W. S. Stinson, M.D., Bay City, and Wilfrid Haughey, M.D., Battle Creek.

Front row: G. B. Saltonstall, M.D., Charlevoix, Chairman of Publication Committee; Arch Walls, M.D., Detroit, President-Elect; W. S. Jones, M.D., Menominee, President; D. Bruce Wiley, M.D., Utica, Chairman of The Council; W. B. Harm, M.D., Detroit, Vice Chairman of The Council; Ralph W. Shook, M.D., Kalamazoo, Chairman of Finance Committee; L. Fernald Foster, M.D., Bay City, Secretary.

Absent: W. A. Hyland, M.D., Grand Rapids; W. M. LeFevre, M.D., Muskegon; J. D. Miller, M.D., Grand Rapids, and H. B. Zemmer, M.D., Lapeer.

- Progress report on Michigan Medical Service was presented by Wilfrid Haughey, M.D., President of Michigan Blue Shield; progress report on Michigan Hospital Service was given by Wm. S. McNary, Executive Vice President of Michigan Blue Cross.
- Annual reports of individual Councilors on the condition of the profession in their Districts were presented.
- Monthly reports of Council Chairman D. Bruce Wiley, M.D., Utica; President W. S. Jones, M.D., Menominee; Secretary L. Fernald Foster, M.D., Bay City;

## ANNUAL SESSION HIGHLIGHTS

- Rheumatic Fever Coordinator Leon DeVel, M.D., Grand Rapids, were presented and accepted.
- Michigan Health Commissioner A. E. Heustis, M.D., Lansing, presented mutual problems to the Councilors for their information and advice.
  - Committee reports were presented by: (a) Ethics Committee, meeting of December 2; (b) Scientific Radio Committee, December 15; (c) Committee on Study of Fee Schedules, Michigan Medical Service, December 18 and January 14-15; (d) Legislative Committee, December 21; (e) Joint Committee with State Bar of Michigan, December 21 and January 19; (f) Preventive Medicine Committee, January 5; (g) Postgraduate Medical Education Committee, January 12; (h) Committee on Arrangements for Residents-Interns-Senior Medical Students Conference, January 12; (i) Rural Medical Service Committee, January 18; (j) Committee on Closed Panel Practice, January 25; and (k) Industrial Health Committee, January 22.
  - Program for the MSMS County Secretaries-Public Relations Seminar of January 27-28-29, to be held in Detroit, was presented and approved.
  - Committee on Memento for R. L. Novy, M.D., Detroit, longtime President of Michigan Medical Service, made its recommendations which were approved by The Council.
  - Appointments. (a) At the request of the Governor, The Council nominated the following for the Governor's Commission to Study Prepaid Hospital Care Plans—one MSMS representative to be selected: K. H. Johnson, M.D., Lansing; W. S. Jones, M.D., Menominee; A. E. Schiller, M.D., Detroit; O. D. Stryker, M.D., St. Clair Shores; and E. C. Swanson, M.D., Vassar. (b) Max L. Lichter, M.D., Detroit, as member of Committee on Closed Panel Practice, MSMS.
  - Matters referred to The Council by the 1955 House of Delegates: Reports were made on a question of screening foreign graduates; (b) pollution of inland waterways; (c) and optometric legislation. These reports were referred to the 1956 MSMS House of Delegates.
  - MSMS representatives: (a) R. L. Novy, M.D., Detroit, to Symposium on Medical Schools and Their Relationship to Private Practice (AMA sponsored), Chicago, February 13; (b) Wilfrid Haughey, M.D., Battle Creek, to Professional Relations Conference of Blue Shield, Chicago, February 16-18; (c) Executive Director Wm. J. Burns as Chairman of Organization Board for Michigan Week, May 20-27 was authorized.
  - Proposal of State Board of Pharmacy to increase state narcotic license fee from \$1 to \$2: The Council feels there should be no increase unless it can be proven it is warranted.
  - Southeastern Michigan Tuberculosis x-ray screening survey project. This project which did not receive the approval of the Executive Committee of The Council on December 14, was reconsidered. After lengthy discussion, The Council sustained the action of the Executive Committee, but heartily endorsed the project—provided it follows the previous screening processes and does not include follow-up 14" x 17" films.
  - The Council congratulated the MSMS Executive Office on its development of two new brochures: (a) "Progress"; and (b) "So You've Been Elected," the organizational handbook for component society officers. Both of these brochures will be presented at the County Secretaries-Public Relations Seminar of January 27-29.
  - The Council recommended to the 1956 House of Delegates that the Constitution be amended in Article X, Section 3, to give the Vice-Speaker of the House of Delegates a vote in The Council and in the Executive Committee of The Council.
  - The Council approved the Secretary's recommendation that the one per cent (1%) dues collection expense be allowed to component societies only if deducted prior to remitting dues, to obviate much unnecessary bookkeeping.
  - The Council authorized the study of use of electronic devices (such as IBM) to modernize the MSMS membership system.

## ANNUAL SESSION OF THE COUNCIL

## MEMBERSHIP RECORD—1955

COUNTY MEDICAL SOCIETY	PAID		SPECIAL MEMBERS			DEATHS		NET		G	1955		UNPAID
	1954	1955	L I F E	R E T I R E D	A M S I S T A N T	1954	1955	1954	1955	A I N	L O S S	1954	1955
Allegan	22	24	—	—	—	—	3	23	21	—	2	—	—
Alpena, Alcona, Presque Isle	23	24	2	—	—	1	—	27	27	—	—	—	—
Barry	11	16	2	—	—	—	1	14	17	3	—	—	—
Bay, Arenac, Iosco	73	72	5	3	—	2	2	83	82	—	1	—	—
Berrien	77	82	1	—	—	1	1	86	82	—	4	—	2
Branch	25	24	3	—	—	—	—	27	27	—	—	—	1
Calhoun	103	100	12	2	—	24	2	118	137	19	—	—	—
Cass	10	9	2	—	—	—	1	11	11	—	—	—	—
Chippewa-Mackinac	23	23	3	1	—	—	—	27	27	—	—	—	—
Clinton	15	15	1	—	—	—	—	16	16	—	—	—	—
Delta-Schoolcraft	22	20	2	1	—	1	2	22	24	2	—	—	1
Dickinson-Iron	17	18	1	1	—	—	—	18	20	2	—	1	—
Eaton	19	19	—	—	—	4	—	21	23	2	—	—	—
Genesee	205	213	20	—	—	97	4	229	325	96	—	—	1
Gogebic	18	20	1	—	—	—	—	19	21	2	—	—	1
Grand Traverse, Leelanau, Benzie	40	47	1	3	—	3	—	46	53	7	—	1	—
Gratiot-Isabella, Clare	37	41	2	—	—	—	—	43	42	—	1	—	1
Hillsdale	13	14	5	—	—	1	—	19	20	1	—	—	—
Houghton, Baraga, Keweenaw	25	24	7	—	—	—	1	31	31	—	—	—	—
Huron	14	14	1	—	—	—	—	15	15	—	1	—	—
Ingham	190	194	6	8	—	34	3	209	240	31	—	—	—
Ionia-Montcalm	40	36	5	—	—	1	—	46	42	—	4	—	—
Jackson	100	100	15	—	—	5	1	118	117	—	1	—	—
Kalamazoo	142	141	8	3	—	5	2	155	157	2	—	—	—
Kent	323	329	20	1	—	32	6	368	379	11	—	1	5
Lapeer	15	15	4	—	—	1	—	19	20	1	—	—	—
Lenawee	40	40	2	1	—	1	1	43	43	—	2	—	1
Livingston	21	21	—	—	—	—	—	21	20	—	1	—	—
Luce	8	11	1	—	—	—	—	9	12	3	—	—	—
Macomb	60	69	1	—	—	2	—	60	70	10	—	1	—
Manistee	11	10	1	—	—	1	—	11	10	—	1	—	—
Marquette-Alger	35	36	4	2	—	2	—	42	44	2	—	—	—
Mason	11	12	—	—	—	1	—	12	13	1	—	—	—
Mecosta, Osceola, Lake	15	15	2	—	—	—	—	17	17	—	—	—	—
Menominee	17	15	1	—	—	—	—	17	16	—	1	—	—
Midland	29	28	1	—	—	—	—	29	29	—	—	—	—
Monroe	35	36	1	—	—	2	—	35	36	1	—	—	—
Muskegon	94	100	4	2	—	2	3	98	107	9	—	1	—
Newaygo	9	8	—	—	—	—	—	9	8	—	1	—	1
North Central	24	23	1	1	—	2	—	26	26	—	—	—	—
Northern Michigan	33	35	2	—	—	1	1	36	37	1	—	—	—
Oakland	254	278	16	1	—	7	1	276	300	24	—	4	3
Oceana	7	8	2	—	—	1	—	11	10	—	1	—	—
Ontonagon	4	4	1	—	—	—	—	5	5	—	—	—	—
Ottawa	50	51	2	—	—	2	—	54	55	1	—	—	—
Saginaw	124	130	8	6	—	4	2	140	148	8	—	—	—
St. Clair	60	63	1	4	—	7	2	70	74	4	—	—	—
St. Joseph	26	23	2	1	—	—	1	27	26	—	1	—	—
Sanilac	13	13	—	—	—	1	—	13	14	1	—	—	—
Shiawassee	26	27	—	—	—	2	1	27	28	1	—	1	—
Tuscola	18	15	2	—	—	—	2	18	17	—	1	—	—
Van Buren	22	21	2	—	—	—	1	23	23	—	—	—	—
Washtenaw	226	220	10	2	—	104	5	321	332	11	—	6	2
Wayne	2351	2416	98	19	—	81	33	2504	2589	85	—	11	23
Wexford-Missaukee	14	16	2	—	—	—	—	16	17	1	—	—	—
Honorary	—	—	—	—	—	—	—	7	7	—	—	—	—
TOTAL:	5239	5378	296	62	430	83	64	5787	6109	342	20	33	47

## SECRETARY'S ANNUAL REPORT

TO: The Council of the Michigan State Medical Society.

I herewith submit the report of the Secretary for the year 1955.

## MEMBERSHIP

The Michigan State Medical Society membership for 1955 showed a total of 6109 members, including 62 retired, 296 Life & Emeritus and 430 Associate-Military and 7 Honorary members. The total paid membership was 5378 with net dues of \$131,526.25. The 1955 membership was once again at the highest peak in the history of the Society. The number of members with unpaid dues for 1955 was 47.

## DEATHS DURING 1955

I regretfully must report a total of sixty-four deaths among members during the past year.

*Allegan County*—Eugene T. Brunson, M.D., Ganges; Clifford C. Corkill, M.D., Douglas; Charles C. Flinn, M.D., Allegan.

*Barry County*—Guy C. Keller, M.D., Hastings.

*Berrien County*—Henry J. Burrell, M.D., Benton Harbor.

*Calhoun County*—Lawrence N. McNair, M.D., Albion.

*Genesee County*—Glenn R. Backus, M.D., Flint; Henry R. Biggar, M.D., Flint; Arthur McArthur, M.D., Flint; Blythe R. Sleeman, M.D., Linden; George W. Trumble, M.D., Flint.

*Gratiot-Isabella-Clare*—William E. Barstow, M.D., St. Louis.

*Grand Traverse-Leelanau-Benzie County*—Henry Duiker, M.D., Traverse City.

*Ingham County*—E. R. Vander Slice, M.D., Lansing; Harry A. Wilson, M.D., Lansing.

*Jackson County*—Warren B. Anderson, M.D., Jackson; William H. Enders, M.D., Jackson; James J. O'Meara, M.D., Jackson.

*Kent County*—Eugene S. Browning, M.D., Grand Rapids; Peter J. Kriekard, M.D., Grand Rapids; Paul W. Willits, M.D., Grand Rapids.

## ANNUAL SESSION OF THE COUNCIL

*Lenawee County*—Thomas H. Blair, M.D., Adrian.  
*Livingston County*—Harry G. Huntington, M.D., Howell.  
*Manistee County*—Gordon D. Ogilvie, M.D., Manistee.  
*Monroe County*—Herbert W. Landon, M.D., Monroe.  
*Muskegon County*—Robert A. Risk, M.D., Muskegon.  
*Northern Michigan*—George H. Wood, M.D., Onaway.  
*North Central Counties*—Claude R. Keyport, M.D., Grayling.  
*Oakland County*—Charles B. Tolle, M.D., Pontiac;  
Waldron W. Wellman, M.D., Holly.  
*Oceana County*—John H. Nicholson, M.D., Hart.  
*Shiawassee County*—Arthur M. Hume, M.D., Owosso.  
*St. Clair County*—Clayton C. Benjamin, M.D., Port Huron.  
*Washtenaw County*—Hugh M. Beebe, M.D., Ann Arbor;  
Carl Dudley Camp, M.D., Ann Arbor; Reynold L. Haas, M.D., Ann Arbor; Dean W. Myers, M.D., Ann Arbor.  
*Wexford County*—Clifton E. Merritt, M.D., Manton.  
*Wayne County*—Axel U. Axelson, M.D., Detroit; Neil I. Bentley, M.D., Detroit; Ralph H. Bookmyer, M.D., Detroit;  
William Paul Buchanan, M.D., Detroit; Arthur N. Chatel, M.D., Detroit; A. James DeNike, M.D., Detroit;  
Kater Donelson, M.D., Inkster; Walter D. Ford, M.D., Detroit;  
John M. Graff, M.D., Detroit; Robert S. Hewitt, M.D., Lincoln Park; Alfred W. Holmes, M.D., Detroit;  
William H. Honor, M.D., Wyandotte; Frederick W. Hyde, Sr., M.D., Detroit;  
William E. Keane, M.D., Grosse Pointe; Koert Koster, M.D., Detroit;  
Leonard W. Lang, M.D., Detroit; David Littlejohn, M.D., Eloise, Michigan;  
Henry A. Luce, M.D., Detroit; Edgar H. Norris, M.D., Detroit;  
Walter R. Parker, M.D., Detroit; Herman R. Rothman, M.D., Detroit;  
Charles F. Ryan, M.D., Detroit;  
Frank L. Ryerson, M.D., Detroit;  
DeWitt L. Sherwood, M.D., Detroit;  
Harry C. Wissman, M.D., Dearborn.

### THE JOURNAL

The following financial information relative to THE JOURNAL is found in the annual audit report of MaDan & Bailey.

Income was \$84,352.18 which is \$12,952.18 over the tentative budget for 1955. Expenses were \$83,311.13 which was \$12,140.16 over the 1955 tentative budget, however this figure indicates a net gain for the year 1955 of \$1,041.05.

In the total income of \$84,352.18, only \$7,876.46 was received from the allocation of dues.

THE JOURNAL has appeared during 1955 with new art work on the covers. This has been done by Mr. Dirk Gringhuis who was engaged to design the covers depicting various activities of the MSMS.

At the November SJAB Conference in Chicago, a prominent format expert rated the thirty-three State Medical Journals in the Bureau and the THE JOURNAL, MSMS received one of the highest ratings.

### FINANCES

An audit of the books of the Society was completed by MaDan and Bailey as of December 24, 1955. This has been submitted to the Finance Committee for study and is available to any member of the society for perusal at the Executive office, 606 Townsend St., Lansing, Michigan.

A brief summary of the audit produces the following information:

<b>Assets:</b>	
Cash .....	\$ 55,047.37
Accounts Receivable .....	8,998.34
Investments .....	146,930.52
Property .....	53,289.78
Other Assets .....	10,551.41
<b>Total Assets .....</b>	<b>\$274,817.42</b>

<b>Liabilities:</b>	
Accounts Payable .....	6,572.80
Deferred Income .....	3,310.00
<b>Total Liabilities .....</b>	<b>\$ 9,882.80</b>
<b>Society Equities</b>	
<i>Reserved for Special Purposes</i>	
Public Education Reserve .....	\$ 30,000.00
Public Education Program .....	76,494.02
Public Service Account .....	281.28
Professional Relations Account .....	6,805.30
Rheumatic Fever Control Program .....	22,704.24
Contingent Fund .....	37,267.34
Building Fund .....	13,788.46
General Society Equity .....	73,452.24
Net Gain for Period .....	4,141.74
<b>Total Liabilities and Equities .....</b>	<b>\$274,817.42</b>

We note from the Income and Expense Summary of December 24, 1954 to December 24, 1955, that the total balance, other than the Beaumont portion, was \$234,470.54. Income for the period was \$385,669.57. Expenses for the period were \$364,995.78, net gain is \$20,673.79 with a balance on hand of \$255,144.33.

The balance advanced to the Beaumont Memorial is \$9,790.29.

Increases in expenditures have been for General Society activities. The allocations of dues to the Public Relations Department have remained at \$15.00 which was a decrease that has been in effect one year.

The 1955 House of Delegates authorized a \$10.00 assessment for the General Funds and P. E. Reserve in order that they might be maintained at a level consistent with the general activities of the society.

### 1955 ANNUAL SESSION

We are happy to announce that once again the 1955 Annual Session broke all previous attendance records (for Grand Rapids) with a total of 3,585. The breakdown on the registration follows: Doctors of Medicine 1671, Guests 559, Exhibitors 597, Woman's Auxiliary members 366, and Medical Assistants Society members 392.

The General Assembly type of program with discussion conference was continued as in previous years and the 124 Technical and 13 Scientific Exhibits received the usual generous attention of the registrants.

### 1955 HOUSE OF DELEGATES

The 90th Annual Session of the Michigan State Medical Society's House of Delegates was held in Grand Rapids, September 26-27, 1955.

The House of Delegates:

1. Adopted with thanks the President's Address, the President-Elect's Address, the report of Delegates to the American Medical Association, the Annual Report of the President, Woman's Auxiliary to the Michigan State Medical Society, and the Annual Report of the President, Michigan State Medical Assistants Society.

2. The Annual Reports of The Council (including the Annual Reports of Committees of The Council) were adopted as amended (re assessment for 1956).

3. Adopted Annual Reports of all Standing Committees and of all Special Committees of the Society.

4. *Elected Walter H. Winchester, M.D., Flint*, as Michigan's Foremost Family Physician for 1955.

5. Adopted resolutions concerning: (a) appreciation of public service rendered by R. L. Novy, M.D., Detroit; (b) Beaumont Memorial preservation; (c) screening of foreign interns; (d) Jenkins-Keogh Bill; (e) "Medic" —commendation to the Los Angeles County Medical Society; (f) medical representation on Voice of America; (g) fee for examination of mentally ill; (h) possible optometric legislation; (i) creation of Occupational Health Section; (j) driver training; (k) AMA Study Committee on Highway Accidents; (l) appreciation of service rendered by L. A. Drolett, M.D., Lansing; (m)

## ANNUAL SESSION OF THE COUNCIL

speedy recovery for President Eisenhower; (n) Committee on Division of Fees (MMS); (o) California Cancer Commission; (p) periodic health examinations by hospital staffs; (q) hospital privileges (approved as amended); (r) hospital facilities for the mentally ill (approved as amended); (s) study of surgical fees—Blue Shield (approved as amended); (t) contributions to Beaumont Memorial (approved as amended).

Adopted substitute resolutions concerning: (a) propaganda on Salk vaccine; (b) pollution of inland waterways; (c) Blue Shield reporting in mediation cases; (d) expansion of AMA administrative facilities; (e) non-scientific sessions at AMA Conventions.

Referred: (a) to introducer, for clarification, a resolution re Joint Commission on Accreditation of Hospitals; (b) to MSMS Mental Health Committee for study a resolution re increasing hospital personnel for the mentally ill.

6. Disapproved resolutions concerning: (a) county society membership; (b) fluoridation of water; (c) old age and survivors insurance program—but recommended that county medical societies conduct polls of their memberships on this question; (d) election of Executive Committee of The Council.

7. Elected to Special Memberships:

(a) *Thirty-five members to Life Membership:* (Bay) Aloysius J. Zaremba, M.D., Bay City; (Branch) Kendall B. Rees, M.D., Coldwater; (Dickinson-Iron) George H. Boyce, M.D., Iron Mountain; (Genesee) Clifford P. Clark, M.D., Coral Gables, Florida, Lafon Jones, M.D., Flint, and Edwin E. Miller, M.D., Flint; (Ionia-Montcalm) Robert H. Haskell, M.D., Northville, Lee E. Kelsey, M.D., Lakeview, and Isaac S. Lilly, M.D., Stanton; (Jackson) Edward W. Douglas, M.D., Jackson, Walter L. Finton, M.D., Jackson, and Frank F. Pray, M.D., Jackson; (Kalamazoo) Dirk J. Scholten, M.D., Kalamazoo; (Menominee) Henry T. Sethney, M.D., Menominee; (Midland) Joseph H. Sherak, M.D., Midland; (St. Joseph) Charles G. Miller, M.D., Sturgis; (Washtenaw) Howard H. Cummings, M.D., Ann Arbor, Warren E. Forsythe, M.D., Ann Arbor, Christopher G. Parnall, M.D., Ann Arbor, and Inez R. Wisdom, M.D., Ann Arbor; (Wayne) Alexander W. Blain, M.D., Frederick H. Cole, M.D., William A. Defnet, M.D., Martin S. Dubpernell, M.D., Samuel Glassman, M.D., Fred L. Honhart, M.D., Charles J. Jentgen, M.D., E. V. Joinville, M.D., George M. Laning, M.D., Elbert A. Martin, M.D., William O. Merrill, M.D., Plinn F. Morse, M.D., Fred W. Organ, M.D., John B. Rieger, M.D., and Susanne M. Sanderson, M.D., all of Detroit.

(b) *Seven members to Retired Membership:* (Bay) Edward S. Huckins, M.D., Bay City; (Calhoun) Theodore Kolvoord, M.D., Battle Creek; (Delta-Schoolcraft) John J. Walch, M.D., Escanaba; (Wayne) John R. Boland, M.D., Jerome W. Ankley, M.D., Ray D. Schirack, M.D., Bertrand C. Switzer, M.D., all of Detroit.

(c) *Seventeen members to Associate Membership:* (Delta-Schoolcraft) Gilbert W. Benson, M.D., Escanaba; (Eaton) Richard K. Meinke, M.D., Rochester, Minnesota; (Muskegon) Robert G. Heneveld, M.D., (Wayne) Henry A. Archambault, M.D., Detroit, Dorothy Fisher Caton, M.D., Detroit, Charles M. Ebner, M.D., Detroit, Martin Z. Feldstein, M.D., Detroit, Dunbar P. Gibson, M.D., Detroit, Gene L. Hackleman, M.D., Dearborn, Ralph G. Hubbard, M.D., Detroit, Werner K. Kersten, M.D., Detroit, Francine Larson, M.D., Wyandotte, Nur M. Malik, M.D., India; Charles W. Park, M.D., Detroit, Eugene V. Perrin, M.D., Washington, D.C., Jack C. Smith, M.D., Detroit, and Vincent J. Turcotte, M.D., Detroit.

8. Elected the following officers:

(a) A. E. Schiller, M.D., Detroit, as Councilor of the 1st District (1960).

(b) O. B. McGillicuddy, M.D., Lansing, as Councilor of the 2nd District (1960).

(c) G. W. Slagle, M.D., Battle Creek, as Councilor of the 3rd District (1960).

(d) D. Bruce Wiley, M.D., Utica, as Councilor of the 15th District (1960).

(e) G. Thomas McKean, M.D., Detroit, as Councilor of the 16th District (1960).

(f) J. S. DeTar, M.D., Milan (1957); W. A. Hyland, M.D., Grand Rapids (1957); and C. I. Owen, M.D., Detroit (1957), as Delegates to the American Medical Association.

(g) W. W. Babcock, M.D., Detroit (1957); E. F. Sladek, M.D., Traverse City (1957); O. J. Johnson, M.D., Bay City (1957); and Wm. Bromme, M.D., Detroit (1956), as Alternate Delegates to the American Medical Association.

(h) Arch Walls, M.D., Detroit, as President-Elect.

(i) J. E. Livesay, M.D., Flint, as Speaker, House of Delegates.

(j) K. H. Johnson, M.D., Lansing, as Vice Speaker, House of Delegates.

## ORGANIZATIONAL ACTIVITIES

### MICHIGAN CLINICAL INSTITUTE

The Ninth Michigan Clinical Institute was held in Detroit, March 9-10-11, with another record shattering registration of 2,980. For the second year Smith, Kline & French Laboratories presented color television for the instruction and information of these attending. At a special testimonial banquet seven Michigan doctors of Medicine who are presidents of National Organizations were honored.

### ANNUAL SECRETARIES—PUBLIC RELATIONS CONFERENCE

The Annual County Secretaries-Public Relations Conference was held in Detroit, January 30.

### OTHER ORGANIZATIONAL ACTIVITIES

1. The third annual meeting of Michigan's County Medical Society Executive Secretaries (seven) was held in Lansing, February 15, with a program that stimulated greater organizational effort and understanding in mutual problems.

2. The Residents, Interns and Senior Medical Students Conference again was held in Detroit on March 9, coincident with the Michigan Clinical Institute with 138 attending. Since the future of medicine lies in the hands of these young men and women whose zeal—obvious at the March meeting—forecasts a good tomorrow for the medical profession and the people of this State, The Council plans a similar conference coincident with the 1956 Michigan Clinical Institute.

MSMS again sponsored financially the sending of delegates from Michigan's two medical schools to the Student AMA Convention in Chicago in May, 1955.

3. National medical leaders from Michigan continue to increase in numbers: during the 1955 Michigan Clinical Institute, seven Michigan doctors of medicine were honored for achieving, during this year, the presidency of national medical associations: A. C. Curtis, M.D., Ann Arbor; L. A. Ferguson, M.D., Grand Rapids; W. A. Hudson, M.D., Detroit; A. C. Kerlikowske, M.D., Ann

## ANNUAL SESSION OF THE COUNCIL

Arbor; H. M. Pollard, M.D., Ann Arbor; A. D. Ruedemann, M.D., Detroit, and C. C. Sturgis, M.D., Ann Arbor.

4. Indoctrination of new MSMS members. This project, recommended by the Secretary in his Annual Report to The Council, 1954, was referred to the individual Councilors to organize in their respective Districts, with the co-operation of their county medical societies.

5. The Past Presidents' Club was organized during the past year and held its initial meeting in Detroit on March 10. Twelve past executives were present to formulate plans and projects whereby the storehouse of experience and knowledge of this group can be utilized, for the benefit of the entire medical profession and the people of Michigan.

6. For the Beaumont Memorial additional monies are needed to reimburse the Michigan State Medical Society to the extent of \$9,790.29, the sum which the Society loaned to complete the Memorial. Less than 50 per cent of MSMS members have contributed to the building of the Memorial, an architectural and historical gem that belongs to all members of the medical profession and should be the financial responsibility of each and every practitioner of medicine in this state.

7. Organization among the fifty-five component county medical societies, covering all of Michigan's eighty-three counties, was maintained during the past year to a satisfactory degree. The scientific side of medicine in Michigan is at an all-time high. It is gratifying to note the many county and district society "Clinic Days" and the great increase in contributions to the medical literature by our members. Your secretary and various officers of the society paid official visits to most of the 55 county societies during 1955.

*The Woman's Auxiliary and Medical Assistant's Society* have continued many progressive projects during 1955. The latter has been active in stimulating the formation of a National Organization and were represented at the initial meeting in Kansas City.

*Contacts with Governmental and Voluntary Agencies* have been actively maintained during the past year. These contacts were reported in detail in the annual report of The Council.

### PUBLIC RELATIONS

"Winning Friends for Medicine" continued to be the PR guidebook for Michigan Medicine in 1955. Carrying on the integration of county medical society PR programs with that of the MSMS, this publication became the workbook around which 29 meetings were held in as many areas of the State. A special effort succeeded in covering the Upper Peninsula with a series of meetings, the state delegation consisting of President R. H. Baker, M.D., President-Elect, William S. Jones, M.D., Secretary, L. Fernald Foster, M.D., Councilors T. P. Wickliffe, M.D., and B. T. Montgomery, M.D., and PR Counsel H. W. Brenneman. The other meetings were uniformly attended by key county medical society officers and by MSMS Officers and Councilors, PR Committee Chairman, C. Allen Payne, M.D., and public relations field secretaries.

Compiling figures on the communications media used during the past year reveals that articles written about M.D.'s, MSMS, and the views of the medical profession in Michigan newspapers would fill a newspaper column two miles long. The general tenor of the articles and the facts used are often the result of painstaking work by MSMS Officers and staff members. Motion pictures filmed and furnished by MSMS had a total running time of 151 hours before live audiences and television viewers in groups ranging from 15 to 150,000. MSMS supplied 44¾ hours of television programming and 435 hours of radio time. MSMS distributed a total of 96,484 pamphlets on timely matters of health import.

Work went forward on the production of the new MSMS sound and color 16 mm film "Something Called

Epilepsy" and only a small fraction of the picture remains to be filmed and edited. Progress has been made on the Periodic Health Appraisal film script.

Your Officers and PR representatives have attended State and national conferences. These permitted adequate opportunity to discuss medicine's accomplishments and policies with leaders in various public interest fields, i.e., Rural Health, Adult Education, Medical and Professional PR, etc., at the same time affording comparison of projects with other state and county organizations. It is significant that Michigan is still cited as a leader in the field of medical public relations, one evidence being receipt this year of the ATAE Grand Award for State and Local Associations based on the medical associates recruitment program.

A great loss to our staff and our program was caused by the death of our veteran PR Field Secretary, Stuart A. Campbell. His knowledge and contacts developed over the years were extremely valuable. His loss has already been felt. After a thorough search Mr. Richard N. Philleo of Lansing was selected to fill the vacancy left by Mr. Campbell.

Awards granted this year to newspapers, radio and TV stations, and to individuals who have made outstanding contributions to health is evidence of the increasing assistance the medical profession is receiving in its announced intention of supplying adequate medical service and health education to a maximum number of people.

It seems unnecessary and repetitious to review in detail the specific PR program carried out by MSMS in 1955 because of the many publications which have carried that story and which themselves are indicative of strenuous activity intelligently applied. I would, however, invite your attention to the often overlooked fact that the PR program is not a thing set apart from other Society work, but rather, is inseparably part of every program of any nature which we have undertaken. This is particularly apparent in the new guidebook for members, "Progress . . . because Doctors Work Together" which has just been completed.

Last year this report referred to the growing trends of certain forces outside of medicine to make inroads upon the freedoms traditionally accorded professional people. In respect to medicine these trends have unfortunately increased during the past year. They now constitute four basic threats to the welfare of our profession and the people we serve. These threats are found in the corporate practice of medicine, socialized medicine, and the extension of undue influence in medical practice by business, labor and lay-controlled health interests. It therefore must be concluded that 1956 will demand increasing attention to these matters of prime public relations interest.

### LEGISLATION

The Congress and the Michigan Legislature have but lately convened since our review of legislation reported in the Mid-Summer Meeting of The Council so I need not elaborate upon the legislative activities of 1955.

From these legislative bodies, however, have come definite indications that 1956 will bring greater attention to health problems. Already legislative proposals have been prepared respecting the Medical Practice Act, hospitals, mental health, chronic illness, disability insurance, consolidations of health agencies, supply of doctors, the financing of medical services, sickness as related to Workman's Compensation, etc. We need have no illusions that substandard healing groups will make their perennial attempts to gain access to the privilege of practicing medicine. We are informed that bills have been prepared requesting government licensure of vocations on the periphery of medicine for introduction into the State Legislature.

In the National Congress, legislation, particularly in the field of Social Security and Disability, holds our interest.

## ANNUAL SESSION OF THE COUNCIL

In addition we would be derelict in our duty as doctors and as citizens if we failed to recognize the importance of the elections of 1956 and the issues at stake. We have had other "years of decision" but for determination of long-range policies no previous year has offered more opportunity for good or evil than 1956 promises. I repeat our often expressed conviction that a realistic and personal interest in legislation and the legislative processes must be a primary part of MSMS plans.

### COMMITTEES

Time and space do not permit the listing in detail of the many activities of all the committees contributing to the many splendid programs of the State Society. The accomplishments of the committees of the Society were achieved at the expense of many hours of personal sacrifice on the part of the personnel of the various committees. During 1955, *sixty-one* committees of the Michigan State Medical Society held a total of *seventy-seven* meetings and practically every meeting was attended by your Executive Director or Secretary. A total of 500 fellow members of your State Medical Society gave freely of their time to attend these meetings and assist in the operational activities of the State Society. Too much commendation cannot be accorded the committee members who contributed their time and effort to develop and execute constructive programs—both scientific and economic—for the public welfare and to maintain the position of leadership enjoyed by the Michigan State Medical Society in the field of progressive medical planning.

A committee representing all Councilor Districts was appointed during the year and has been actively at work studying the matter of Blue Shield Fee Schedules. This committee will make its report at a later date.

Active contacts are being made with governmental authorities in the matter of maintaining the Home Town Medical care plan for veterans.

### SECRETARY'S LETTERS

As a part of the Society's general educational and informational program for individual members and for component County Societies there were issued during the year 1955, nine Secretary's Letters—(four to all members and five to county secretaries and keymen. These informational circulars were in addition to the monthly issues of *THE JOURNAL* with its scientific articles and informative news items. In addition, six Legislative Bulletins were issued to keymen during the 1955 Legislative Session to keep the membership informed of activities in the State Legislature pertaining to the practice of medicine.

### THE EXECUTIVE OFFICE

Continued improvements have been made from time to time to the Executive Office. Increased parking facilities are now in the process of being provided by enlarging the paved parking area.

During the year, the Society lost a valued employee in the death of Stuart A. Campbell, Field Secretary. He was subsequently replaced by Mr. Richard Philleo of Lansing, Michigan.

Much valuable time of The Council and Executive Committee could be conserved if the constantly arising replacements and minor maintenance projects at the Executive office could be authorized at the time of need by the Secretary.

Again your attention is drawn to the antiquated and cumbersome membership record system at the Executive Office and a recommendation on this is included in this report.

The stenographic pool is operating short handed and should be increased by at least one more stenographer.

The Executive Office personnel has at all times discharged its duties with commendable loyalty and efficiency.

### THE COUNCIL

Two new councilors were elected at the 1955 House of Delegates. Oliver McGillicuddy, M.D., succeeded Robert S. Breakey, M.D., in the 2nd District, and Arthur E. Schiller, M.D., succeeded Arch Walls, M.D., in the 1st District. Early in 1955, Dr. Thomas McKean was appointed to serve the unexpired term of Wyman D. Barrett, M.D., of the 16th District. In November, 1955, Walter S. Stinson, M.D., Bay City, was appointed to serve the unexpired term of Fred Drummond, M.D., of the 10th District.

After a careful consideration of the continued successful operation of the MSMS and its many projects, I respectfully submit the following recommendations: That—

1. The Vice Speaker of the House be made a member of The Council and its Executive Committee.

2. The Executive Office maintenance details be delegated to the Secretary.

3. The 1 per cent collection expense be allowed to County Medical Societies only if deducted prior to remitting dues.

4. That if the present study of membership records warrants, an IBM system (consistent with AMA method) be adopted—at least for operation by January 1, 1957.

5. Authority be given to employ another full-time stenographer for the stenographic pool.

Your Secretary wishes to express to the members of this Council his sincere appreciation for the helpful co-operation they have accorded him during the past year.

Too much commendation cannot be accorded the members of the Executive office staff for their loyalty, splendid co-operation and efficiency.

Your Secretary is especially appreciative of the constructive advice and services of Mr. Wm. J. Burns, Executive Director, Mr. J. Joseph Herbert, Legal Counsel, Wilfrid Haughey, M.D., Editor, and Mr. Robert Roney, Assistant Executive Director. We are especially grateful to Mr. Hugh Brenneman and his staff of exceptionally fine Field Secretaries who have done an unusual job, especially in legislative activities.

To everyone who has aided so generously and willingly in the discharge of the duties of his office, your Secretary is most grateful.

Respectfully submitted,

L. FERNALD FOSTER, M.D.  
Secretary

## TREASURER'S ANNUAL REPORT—1955

(To December 24, 1955, inclusive)

Mr. Chairman and members of The Council of the Michigan State Medical Society:

I herewith submit a report of the securities and cash belonging to the Michigan State Medical Society in my possession and in the Lansing office under my supervision as duly elected Treasurer for the year January, 1955, to January, 1956.

Listed below are the bonds and time certificates totaling \$67,000.00 face value in lock box C-131, Michigan National Bank Trust Department in Grand Rapids.

3—Michigan National Bank Savings Certificates at \$5,000.00 each .....	\$15,000.00
7—United States Savings Bonds, Series G, at \$5,000.00 each .....	35,000.00
5—United States Savings Bonds, Series G, at \$1,000.00 each .....	5,000.00
4—United States Savings Bonds, Series K, at \$1,000.00 each .....	4,000.00
8—United States Government notes 75-80 at \$1,000.00 each .....	8,000.00

TOTAL: \$67,000.00

JMSMS

## ANNUAL SESSION OF THE COUNCIL

Listed below are the bonds and time certificates totalling \$80,000.00 face value which are kept in the safe of the Michigan State Medical Society at 606 Townsend Street, Lansing. (Actual bonds are not on hand, only safekeeping receipts from the Michigan National Bank, Lansing.) The bonds are in trust with the First National Bank of Chicago.

U. S. Treasury Bonds 2½% due 3/15/70 optional 3/15/65 (Safekeeping Receipt No. A-726 dated 2/16/55)	\$ 10,000.00
U. S. Treasury Bonds, Series K, 12 year maturity (Safekeeping Receipt No. A-718 dated 1/11/55)	45,000.00
Michigan National Bank Time Savings Certificate No. 6240 dated 3/16/55 at 2½% interest	25,000.00
<b>TOTAL:</b>	<b>\$ 80,000.00</b>

Total Securities owned (Face Value).....\$147,000.00

Balance of Treasurer's Account as of January 1, 1955.....\$4,848.01

Interest received from bonds and certificates of deposit,  
Jan. 1, 1955-Jan. 1, 1956.....1,520.00

Balance on hand as of December 31, 1955.....\$6,368.01

March 15, 1955, government bonds in the amount of \$15,000.00 face value were called and the money was

reinvested in \$15,000.00—2½% time certificates at the Michigan National Bank in Grand Rapids. The above statement includes interest on the time certificates from March 18 to September 18, 1955, only, as it is paid at the expiration of each six months.

\* \* \*

Total deposits made into the Treasurer's commercial account—Michigan State Medical Society—during 1955:

February 5, 1955	\$ 375.00
March 3, 1955	62.50
March 18, 1955	112.50
April 6, 1955	110.00
May 9, 1955	62.50
August 2, 1955	375.00
September 1, 1955	62.50
September 30, 1955	110.00
November 9, 1955	62.50
December 23, 1955	187.50
<b>TOTAL</b>	<b>\$1,520.00</b>

Respectfully submitted,

WM. A. HYLAND, M.D.  
Treasurer

## EDITOR'S ANNUAL REPORT—1955

THE JOURNAL of the Michigan State Medical Society has now completed its fifty-fourth year and has published 640 numbers. Its founder, Andrew Porter Biddle, M.D., of Detroit, in the first issues established high ideals and set a goal toward which THE JOURNAL has constantly strived. The first and final reason for existence is to bind the membership of our Michigan State Medical Society into ever stronger and more cohesive affiliations; to bring to our members the latest in medical and surgical knowledge; to explain and expound our economic and professional problems; to bring to each member the consensus of thought and conference in all matters relating to the good of our patients; and to better the ability of our readers to perform for the best interests of all.

We have brought forward the political and social news as well as the economic interest; we have published in so far as we could, all the best advances in the science and art of medicine and we have reported the actions and proceedings of our elected officers and administrators. The editorial policy has continued its task of transmitting to our members circumstances and ideals bearing on the good of our people and of our own practice. The House of Delegates and The Council are our policy-making and interpreting bodies, one of which meets at least every month. Dozens of items or actual problems are discussed and decided at these meetings, and it has been our willing and useful function to express and present these facts to our members as fairly and explicitly as possible.

The past fifteen years have been significant ones. The economic stress—the urge toward socialization of the profession has been recognized and countered at all times. The editorial policy has been necessarily an economic and sociologic one rather than scientific. We have felt the scientific phase of our profession was suitably reflected in the many original papers, which our members have been encouraged to write and present. This year our register of authors is the longest ever—195, nineteen appearing on two contributions and two names appearing with three listings. It indicates a healthy situation when that many ambitious members are willing to share their learning and ideals with the whole group. The preparation of a paper for publication is no small task and one for which we thank our authors in appreciation.

The number of pages published this year, 1,538, is not too much different from the past several years: in 1942—1,092 pages; 1943—1,022 pages; 1944—1,134

pages; 1945—1,414 pages; 1946—1,692 pages; 1947—1,476 pages; 1948—1,446 pages; 1949—1,566 pages; 1950—1,526 pages; 1951—1,470 pages; 1952—1,654 pages; 1953—1,414 pages; 1954—1,454 pages.

There have been prepared and published, fifty-two book reviews, sixty-six editorials and thirteen editorial comments. We have published nineteen In Memoriam items, including obituaries of four past presidents, Drs. Barstow, Hume, Keyport, and Luce. The Michigan State Medical Society has honored eight of our members for national presidency of medical societies and has published appreciations in THE JOURNAL.

The individualism of our covers has been continued now over a period of twelve years, no two being the same. In April, 1945, we started publishing pen pictures of our past presidents, officers, speakers, and others. In 1948, the covers were assigned to various activities and interests of the Society, a policy which has continued. A scrap book of all these covers is most illuminating as showing the broad scope of activities a State Medical Society may present. In 1955, our covers, and our especially designated numbers have been, January—Heart, emphasizing research, education, cardiac home-makers, and rheumatic fever control; February—Maternal Health, featuring a memorial to Alexander M. Campbell, M.D.; March—Arthritis; April—Cancer; May—"Grow Old Along With Me"; June—Medicine's Unsolved Problem—Blue Shield; July—90th Annual Session; August—Industrial Number; September—Coller-Penberthy-Thirlby number, with the roster as a second section; October—The Generalist; November—Tuberculosis and the Christmas Seal; December—Michigan Clinical Institute programs with illustration bearing on attendance.

The roster, which was published as a supplement and bound separately, contained 96 pages as compared to 76 pages a year ago.

We wish to express our thanks to the numerous members who have helped us gather the material for the many specialty numbers. We also express our gratefulness and appreciation to the Publication Committee and the Executive Committee for their continued help and counsel. The work has been most pleasant and stimulating.

Respectfully submitted,  
WILFRID HAUGHEY, M.D.  
Editor

## ANNUAL SESSION OF THE COUNCIL

## REPORT OF MADAN AND BAILEY, CPA—1955

The Council, Michigan State Medical Society:

Pursuant to your request, we have examined the Statement of Financial Condition of the MICHIGAN STATE MEDICAL SOCIETY, Lansing, Michigan, as at December 24, 1955, and the related statements of income and expense and fund transactions for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying Statement of Financial Condition and related statements of income and expense and fund transactions, present fairly the position of the MICHIGAN STATE MEDICAL SOCIETY as at December 24, 1955, and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

The commercial account maintained at the Michigan National Bank, Lansing, Michigan, was reconciled by us, and further confirmed by direct correspondence with the bank as at December 24, 1955. The Michigan National Bank, Grand Rapids, Michigan, confirmed the balance in the Treasurer's account in a letter to the Society of office dated December 23, 1955. Cash in the Lansing office, in an amount of \$36.61, was counted by our representative. Detroit Petty Cash of \$50.00 was not verified.

Confirmations of Accounts Receivable have been received from approximately fifty per cent of the debtors. We shall notify your office if any negative confirmations are received. An aging of the accounts by month of charge is as follows:

October, November, December.....	\$7,377.39
July, August, September.....	149.56
Over Six Months.....	357.67
Employee Expense Advances.....	300.00
<b>TOTAL</b>	<b>\$8,184.62</b>

The premiums due from employees for their share of the insurance plan, introduced on February 1, 1955, is to be received via the payroll check-off in the month of January, 1956. A summary of the premium cost for the first year is as follows:

	Total	Society Share	Employee Share
Premium—1 Year.....	\$19,833.41	\$10,663.25	\$9,170.16
Refund—Deceased Employee.....	891.54	448.38	443.16
<b>NET COST</b> .....	<b>\$18,941.87</b>	<b>\$10,214.87</b>	<b>\$8,727.00</b>
Monthly collections from employees	7,890.35		7,890.35
	<b>\$11,051.52</b>		<b>\$ 836.65</b>
Due from Employees in January, 1956.....	836.65		836.65
	<b>\$10,214.87</b>	<b>\$10,214.87</b>	<b>-0-</b>

Schedule 10 sets forth in detail the changes in your investments during the period, together with an analysis of interest received and amortization taken. Safekeeping certificates were presented to our representative in substantiation of \$55,000.00 face value of U. S. Government Bonds. The \$25,000.00 Time Certificate was presented for our inspection. The remaining \$67,000.00 face value of investments, held by the Treasurer in the Michigan National Bank, Grand Rapids, Michigan, were confirmed by two letters, one from the Treasurer and one from the bank, to the Society office in Lansing, Michigan.

An analysis of real estate owned is set forth in Schedule #11.

The Statement of Financial Condition does not reflect the value of office equipment, such as furniture, movie projectors and similar items, as these assets are charged to expense when purchased.

Income of the Beaumont Memorial Restoration Fund, in an amount of \$690.00, was composed of gifts from individuals and county societies. No expense was charged to this fund during the year under review.

A letter with recommendations for your consideration in relieving your office of some of its detailed bookkeeping procedures is submitted under separate cover.

Membership dues for the period were reconciled to the 5,375 paying members. Of the 5,853 cards used during the year, we were able to account for all but two.

Income derived from the sale of booth space at the Annual Session and the Michigan Clinical Institute was verified by us, and a test check of JOURNAL advertising was traced through the books of account.

The net gain from all sources was \$20,673.79, the detail of which is set forth in Exhibit "C".

Respectfully submitted,  
MADAN AND BAILEY  
By KENNETH B. KNOTSMAN  
Certified Public Accountant

January 6, 1956

## INCOME AND EXPENSE SUMMARY

December 24, 1954, to December 24, 1955

	Balance 12-24-54	Income For the Period	Expense For the Period	Net Gain or —Loss	Balance 12-24-55
Equity—General Fund		\$134,929.30	\$132,981.76	\$ 1,947.54	
Annual Session		29,505.00	26,163.56	3,341.44	
Michigan Clinical Institute	\$ 73,452.24	12,746.00	14,934.29	—2,188.29	\$ 77,593.98
THE JOURNAL		84,352.18	83,311.13	1,041.05	
Contingent Fund	29,390.82	7,876.52	0	7,876.52	37,267.34
Building Fund	11,770.04	10,502.00	8,483.58	2,018.42	13,788.46
Beaumont Memorial Fund*	—10,480.29	690.00	0	690.00	—9,790.29
Public Education Reserve	30,000.00	0	0	0	30,000.00
Public Education Program	76,816.26	33,022.36	33,344.60	—322.24	76,494.02
Public Service	3,330.00	18,378.50	21,427.22	—3,048.72	281.28
Professional Relations	6,545.92	27,567.71	27,308.33	259.38	6,805.30
Rheumatic Fever Control Program	13,645.55	26,100.00	17,041.31	9,058.69	22,704.24
<b>TOTAL</b>	<b>\$234,470.54</b>	<b>\$385,669.57</b>	<b>\$364,995.78</b>	<b>\$20,673.79</b>	<b>\$255,144.33</b>
*Less: Applicable to Beaumont Portion	—10,480.29	690.00		690.00	—9,790.29
<b>TOTAL OTHER THAN BEAUMONT PORTION</b>	<b>\$244,950.83</b>	<b>\$384,979.57</b>	<b>\$364,995.78</b>	<b>\$19,983.79</b>	<b>\$264,934.62</b>

Notes: The debit balance in the "Beaumont Fund" indicates that all funds have been expended, and in addition thereto the Society has advanced a total of \$9,790.29.

## ANNUAL SESSION OF THE COUNCIL

## STATEMENT OF FINANCIAL CONDITION

December 24, 1955

## EXPENSES

December 24, 1954, to December 24, 1955

ASSETS			
<b>CASH ON HAND AND IN BANKS:</b>			
Michigan National Bank, Lansing,			
Michigan .....	\$ 48,592.75		
Michigan National Bank, Grand Rapids			
Michigan (Treasurer's Account) .....	6,368.01		
Office Cash (Lansing and Detroit,			
Michigan) .....	86.61	\$ 55,047.37	
<b>ACCOUNTS RECEIVABLE:</b>			
Advertising, Advances and Other Items .....	\$ 8,184.62		
Collection Expenses .....	103.37		
Due from Employees—Insurance			
Premiums .....	836.65		
	\$ 9,124.64		
Less: Allowance for Doubtful Accounts....	126.30	8,998.34	
<b>INVESTMENTS</b>			
(Market or Redemption Value \$144,389.13)		146,930.52	
<b>PROPERTY AND EQUIPMENT</b>			
Land .....	\$ 10,000.00		
Office Building .....	\$34,500.00		
Lot Adjoining Office Building .....	6,000.00		
Building Improvements .....	3,917.85		
Building Equipment .....	3,836.09		
Parking Lot .....	1,913.60	50,167.54	
	\$ 60,167.54		
Less: Depreciation Allowance.....	6,877.76	53,289.78	
<b>OTHER ASSETS</b>			
Prepaid Expenses .....	\$ 761.12		
Funds Advanced to the Beaumont Me-			
morial Restoration Fund .....	9,790.29	10,551.41	
<b>TOTAL ASSETS</b> .....		\$274,817.42	
<b>LIABILITIES</b>			
<b>ACCOUNTS PAYABLE:</b>			
Federal Unemployment Tax .....	\$ 194.31		
Michigan Unemployment Tax .....	7.16		
Unpaid Invoices .....	4,978.98		
Refunds Due County Societies .....	1,392.35	\$ 6,572.80	
<b>DEFERRED INCOME:</b>			
1956 MCI Booth Sales .....	\$ 3,150.00		
1956 Membership Dues .....	160.00	3,310.00	
<b>TOTAL LIABILITIES</b> .....		\$ 9,882.80	
<b>SOCIETY EQUITIES:</b>			
Reserved for Special Purposes .....			
Public Education Reserve.....	\$30,000.00		
Public Education Program....	76,494.02	\$106,494.02	
Public Service Account ....	281.28		
Professional Relations			
Account .....	6,805.30		
Rheumatic Fever Control			
Program .....	22,704.24		
Contingent Fund .....	37,267.34		
Building Fund .....	13,788.46		
<b>TOTAL RESERVED</b> .....	\$187,340.64		
General Society Equity—			
12-24-54 .....	\$73,452.24		
Net Gain for Period			
(Exhibit "B") .....	4,141.74	77,593.98	
<b>TOTAL EQUITIES</b> .....		264,934.62	
<b>TOTAL LIABILITIES AND EQUITIES</b>		\$274,817.42	

## STATEMENT OF INCOME AND EXPENSE

December 24, 1954, to December 24, 1955

<b>INCOME:</b>			
Membership Dues .....	\$131,526.25		
Miscellaneous .....	144.29		
Interest Income .....	3,241.12		
Amortization .....	17.64	\$134,929.30	
<b>OTHER INCOME:</b>			
Annual Session .....	\$ 3,341.44		
Michigan Clinical Institute .....	2,188.29		
THE JOURNAL .....	1,041.05	2,194.20	
<b>TOTAL INCOME</b> .....		\$137,123.50	
<b>EXPENSES:</b>			
Administrative and General .....	\$ 72,349.72		
Society Activity .....	37,091.11		
Committee Expenses .....	23,540.93	132,981.76	
<b>NET GAIN</b> .....		\$ 4,141.74	

MARCH, 1956

ADMINISTRATIVE AND GENERAL:		Actual
Printing, Mailing and Postage .....	\$ 6,219.66	
Office Supplies .....	2,918.59	
Insurance and Fidelity Bonds .....	5,985.96	
Auditing .....	650.00	
Salaries—Administrative .....	10,200.12	
General Office .....	19,419.68	
General Counsel—Retainer .....	7,200.00	
Expenses .....	1,893.03	
Equipment and Repairs .....	1,501.76	
Telephone and Telegraph .....	3,006.37	
Payroll Taxes .....	1,678.03	
Miscellaneous Expenses .....	790.76	
Secretary's Office Expense .....	300.00	
Employees' Retirement Trust .....	10,214.87	
Residents' and Interns' Conference .....	362.89	
<b>TOTAL ADMINISTRATIVE AND GENERAL EXPENSES</b> .....	\$ 72,349.72	
<b>SOCIETY ACTIVITIES:</b>		
Council Expense .....	\$ 15,155.27	
Delegates and Alternates to AMA .....	6,533.54	
General Society Travel and Entertainment.....	7,190.59	
Officers' Travel .....	4,196.67	
Secretary's Letters .....	452.09	
Woman's Auxiliary .....	600.00	
Dues Collection Expense .....	2,362.95	
Contributions .....	600.00	
<b>TOTAL SOCIETY ACTIVITY EXPENSES</b> .....	\$ 37,091.11	
<b>COMMITTEE EXPENSE:</b>		
Legislative .....	\$ 3,078.65	
Postgraduate Medical Education .....	2,723.19	
Preventive Medicine .....	61.02	
Cancer Co-ordinating Committee .....	1,003.48	
Child Welfare .....	401.45	
Geriatrics .....	926.49	
Industrial Health .....	135.68	
Maternal Health .....	374.32	
Civil Defense .....	744.62	
Mental Health .....	678.26	
Scientific Radio .....	421.81	
Veneral Disease .....	29.49	
Tuberculosis Control .....	237.77	
Michigan Health Council .....	10,000.00	
Rural Medical Service .....	89.07	
Highway Accident Committee .....	302.65	
Beaumont Memorial Restoration .....	438.28	
Permanent Conference Committee .....	110.02	
Sundry Committee Expense .....	1,784.68	
<b>TOTAL COMMITTEE EXPENSES</b> .....	\$ 23,540.93	
<b>TOTAL EXPENSES</b> .....	\$132,981.76	

## ANNUAL SESSION

December 24, 1954, to December 24, 1955

INCOME:		Actual
Booth Sales (125 Spaces) .....	\$ 29,505.00	
<b>TOTAL INCOME</b> .....	\$ 29,505.00	
<b>EXPENSES:</b>		
Scientific Meeting .....	\$ 4,235.56	
Registration .....	232.92	
Exhibit Expense .....	5,056.10	
Hotel Expense (MSMS Staff) .....	495.82	
Officers' Night .....	339.48	
State Society Night .....	4,719.81	
Printing, Mailing & Postage .....	2,811.45	
Press Expense .....	1,125.52	
Scientific Work Committee .....	355.36	
Salaries .....	4,486.25	
House of Delegates .....	1,203.95	
Telephone and Telegraph .....	0	
Miscellaneous and Travel .....	1,101.34	
<b>TOTAL EXPENSES</b> .....	\$ 26,163.56	
<b>GAIN ON ANNUAL SESSION</b> .....	\$ 3,341.44	

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## ANNUAL SESSION OF THE COUNCIL

## MICHIGAN CLINICAL INSTITUTE

December 24, 1954, to December 24, 1955

	Actual
<b>INCOME:</b>	
Booth Sales (74 Spaces) .....	\$ 12,746.00
<b>TOTAL INCOME</b> .....	\$ 12,746.00
<b>EXPENSES:</b>	
Scientific Meeting .....	\$ 2,799.13
Registration .....	95.70
Exhibit .....	3,104.72
Hotel and Entertainment .....	789.90
Printing, Mailing and Postage .....	2,953.46
Press Expense .....	1,805.90
Salaries .....	2,386.11
Miscellaneous .....	999.37
TV .....	0
<b>TOTAL EXPENSES</b> .....	\$ 14,934.29
<b>LOSS ON MCI</b> .....	\$ 2,188.29

## THE JOURNAL

December 24, 1954, to December 24, 1955

	Actual
<b>INCOME:</b>	
Allocation from Dues .....	\$ 7,876.46
Subscription of Others .....	718.03
Advertising Sales .....	71,717.02
Reprint and Cut Sales .....	3,193.83
Miscellaneous (Cash Discounts) .....	846.84
<b>TOTAL INCOME</b> .....	\$ 84,352.18
<b>EXPENSES:</b>	
Editor's Expense .....	\$ 3,000.00
Printing, Mailing and Postage .....	48,282.03
Reprint and Cut .....	2,861.02
Salaries .....	13,276.40
Discounts and Commissions .....	15,657.92
Miscellaneous .....	110.66
Cash Discounts Allowed .....	123.10
<b>TOTAL EXPENSES</b> .....	\$ 83,311.13
<b>GAIN ON THE JOURNAL</b> .....	\$ 1,041.05

## PROFESSIONAL RELATIONS ACCOUNT

December 24, 1954, to December 24, 1955

	Actual
<b>INCOME:</b>	
Allocation from Dues .....	\$ 27,567.71
<b>TOTAL INCOME</b> .....	\$ 27,567.71
<b>EXPENSES:</b>	
Committee Meetings and Awards .....	\$ 172.99
Postage, Mailing and Printing .....	77.78
Rent to Wayne County Medical Society .....	480.00
Salaries .....	13,957.87
Telephone and Telegraph .....	1,214.69
Travel and Entertainment .....	4,565.21
National Meeting Expense .....	1,378.56
Public Relations—County Secretary's Conference .....	2,411.00
County Society Meetings .....	1,082.46
Woman's Auxiliary .....	1,728.76
Miscellaneous .....	14.76
Field Secretary's Office .....	175.00
Field Secretary's Meetings .....	49.25
<b>TOTAL EXPENSES</b> .....	\$ 27,308.33
<b>GAIN DURING PERIOD</b> .....	\$ 259.38

## PUBLIC SERVICE ACCOUNT

December 24, 1954, to December 24, 1955

	Actual
<b>INCOME:</b>	
Allocation from Dues .....	\$ 18,378.50
<b>TOTAL INCOME</b> .....	\$ 18,378.50
<b>EXPENSES:</b>	
Salaries .....	\$ 17,343.23
Telephone and Telegraph .....	795.96
Travel and Entertainment .....	3,081.25
Rural Health Conference .....	206.78
<b>TOTAL EXPENSES</b> .....	\$ 21,427.22
<b>LOSS DURING PERIOD</b> .....	\$ 3,048.72

## RHEUMATIC FEVER CONTROL PROGRAM

December 24, 1954, to December 24, 1955

	Actual
<b>INCOME:</b>	
Grant from Michigan Heart Association .....	\$ 26,025.00
Detroit Center .....	75.00
<b>TOTAL INCOME</b> .....	\$ 26,100.00
<b>EXPENSES: (Central Office)</b>	
Committee Meetings .....	\$ 453.97
Payroll Taxes .....	211.64
Printing, Mailing and Postage .....	1,209.60
Publications and Pamphlets (Purchased) .....	137.50
Salaries—Administrative .....	7,333.28
Office .....	389.22
Travel .....	874.45
Laboratory Aid Plan .....	259.00
<b>TOTAL CENTRAL OFFICE EXPENSES</b> .....	\$ 10,868.66
<b>CONTROL CENTERS:</b>	
Alpena .....	\$ 400.00
Ann Arbor .....	308.50
Bay City .....	780.00
Benton Harbor .....	180.00
Grand Rapids and Muskegon .....	3,076.70
Kalamazoo .....	1,080.20
Lansing .....	16.00
Pontiac and Royal Oak .....	65.25
Traverse City .....	266.00
<b>TOTAL CONTROL CENTERS</b> .....	\$ 6,172.65
<b>TOTAL EXPENSES</b> .....	\$ 17,041.31
<b>GAIN DURING PERIOD</b> .....	\$ 9,058.69

## PUBLIC EDUCATION PROGRAM

December 24, 1954, to December 24, 1955

	Actual
<b>INCOME:</b>	
Allocation from Dues .....	\$ 32,818.81
Miscellaneous (Income) .....	203.55
<b>TOTAL INCOME</b> .....	\$ 33,022.36
<b>EXPENSES:</b>	
Clipping Service .....	\$ 302.16
Committee Meetings .....	502.12
Equipment and Repairs .....	479.67
Printing, Mailing and Postage .....	3,524.94
Office Supplies .....	1,091.53
Salaries .....	13,957.47
Telephone and Telegraph .....	1,479.31
Travel and Entertainment .....	4,921.72
Cinema .....	2,357.27
Display Advertising .....	1,150.06
Publications and Pamphlets .....	3,034.22
Radio and TV .....	0
Miscellaneous .....	544.13
<b>TOTAL EXPENSES</b> .....	\$ 33,344.60
<b>LOSS DURING PERIOD</b> .....	\$ 322.24

## BUILDING MAINTENANCE FUND

December 24, 1954, to December 24, 1955

	Actual
<b>INCOME:</b>	
Allocation from 1955 Dues .....	\$ 10,502.00
<b>TOTAL INCOME</b> .....	\$ 10,502.00
<b>EXPENSES:</b>	
Decorating .....	\$ 204.50
Landscaping .....	45.83
Utilities .....	1,017.72
Janitor—Salary .....	3,318.24
Supplies .....	47.94
Taxes—Property .....	870.96
Insurance .....	348.48
General Repairs .....	362.88
Depreciation .....	1,727.69
Window Cleaning .....	260.00
Miscellaneous .....	215.05
Reception Room Furnishings .....	64.29
<b>TOTAL EXPENSES</b> .....	\$ 8,483.58
<b>GAIN ON BUILDING MAINTENANCE FUND</b> .....	\$ 2,018.42

## ANNUAL SESSION OF THE COUNCIL

## SECURITIES OWNED

December 24, 1955

	Maturity Date	Face Value	Cost 12-24-54 (Book Value)	Redemption Prices 12-24-55	Purchases During Period	Sales or Reductions During Period	Amortization Debit or Credit	Cost 12-24-55 (Book Value)	Interest Received or Accrued
<b>UNITED STATES GOVERNMENT SECURITIES:</b>									
Savings Bonds—Series "G" (Note 1)	5-1-58	\$ 5,000.00	\$ 5,000.00	\$ 4,880.00				\$5,000.00	\$ 125.00
Savings Bonds—Series "G" (Note 1)	3-1-60	5,000.00	5,000.00	4,820.00				5,000.00	125.00
Treasury Notes—Series "A"—1½% (Note 1)	3-15-55		15,000.00			\$15,000.00			112.50
Treasury Bonds—Series "B"—2¾% (Note 1)	4-1-80/75	8,000.00	8,178.50	8,000.00			\$-8.92	8,169.58	220.00
Treasury Certificates of Indebtedness Series "A"—1½%	2-15-55		10,000.00			10,000.00			162.50
Savings Bonds—Series "K"—2.76%	6-1-66	45,000.00	45,000.00	44,055.00				45,000.00	1,242.00
Savings Bonds—Series "K"—2.76% (Note 1)	7-1-66	4,000.00	4,000.00	3,916.00				4,000.00	110.40
Treasury Bond—2½%	3-15-70/65	10,000.00		9,528.13	\$ 9,734.38		26.56	9,760.94	250.00
Time Certificate—Michigan National Bank (Note 1)	2½% Dated 3-18-55	15,000.00		15,000.00	15,000.00			15,000.00	187.50
Time Certificate—Michigan National Bank (Lansing, Michigan) 2½% Dated 3-16-55	2½% Dated 3-16-55	25,000.00		25,000.00	25,000.00			25,000.00	
<b>BONDS HELD FOR PUBLIC EDUCATION PROGRAM:</b>									
Savings Bonds—Series "G" (Note 1)	8-1-58	30,000.00	30,000.00	29,190.00				30,000.00	750.00
<b>TOTAL BONDS</b>		<b>\$147,000.00</b>	<b>\$122,178.50</b>	<b>\$144,389.13</b>	<b>\$49,734.38</b>	<b>\$25,000.00</b>	<b>\$17.64</b>	<b>\$146,930.52</b>	<b>\$3,179.24</b>
Note Receivable—2½%, Demand			3,000.00			3,000.00		0	61.88
<b>TOTAL SECURITIES</b>		<b>\$147,000.00</b>	<b>\$125,178.50</b>	<b>\$144,389.13</b>	<b>\$49,734.38</b>	<b>\$28,000.00</b>	<b>\$17.64</b>	<b>\$146,930.52</b>	<b>\$3,241.12</b>

Note 1: Bonds held by the Treasurer in The Michigan National Bank, Grand Rapids, Michigan.

## PROPERTY AND DEPRECIATION ALLOWANCE

December 24, 1955

	Date Acquired	Cost	Depreciation Allowance Prior Years	Remaining Cost 12-24-54	Estimated Life (Years)	Depreciation Expense 1955	Depreciation Allowance 12-24-55
Land .....	1951	\$10,000.00	\$ 0	\$10,000.00		\$ 0	\$ 0
Building .....	1951	34,500.00	3,900.00	30,600.00	30	1,150.00	\$5,050.00
		<b>\$44,500.00</b>	<b>\$3,900.00</b>	<b>\$40,600.00</b>		<b>\$1,150.00</b>	<b>\$5,050.00</b>
<b>BUILDING IMPROVEMENTS:</b>							
New Building Entrance.....	1953	\$ 3,917.85	\$ 195.90	\$ 3,721.95	30	\$ 130.60	\$ 326.50
<b>BUILDING EQUIPMENT:</b>							
Lighting .....	1952	\$ 2,121.50	\$ 424.29	\$ 1,697.21	15	\$ 141.43	\$ 565.72
Boiler .....	1952	1,714.59	342.84	1,371.75	15	114.30	457.14
		<b>\$ 3,836.09</b>	<b>\$ 767.13</b>	<b>\$ 3,068.96</b>		<b>\$ 255.73</b>	<b>\$1,022.86</b>
<b>PARKING LOT</b> .....	1953	\$ 1,913.60	\$ 287.04	\$ 1,626.56	10	\$ 191.36	\$ 478.40
<b>LOT ADJOINING OFFICE BUILDING</b>		\$ 6,000.00	\$ 0	\$ 6,000.00		\$ 0	\$ 0
<b>TOTAL</b> .....		<b>\$60,167.54</b>	<b>\$5,150.07</b>	<b>\$55,017.47</b>		<b>\$1,727.69</b>	<b>\$6,877.76</b>

## 1956 BUDGET ESTIMATES

## GENERAL FUND

ACCOUNT TITLE	1956 Estimate
<b>INCOME:</b>	
5,000 members @ \$55.00.....	\$275,000.00
Less:	
\$1.50 to THE JOURNAL.....	7,500.00
\$6.25 to Public Education.....	31,250.00
\$3.50 to Public Service.....	17,500.00
\$5.25 to Professional Relations.....	26,250.00
\$3.00 to Contingent Fund.....	15,000.00
\$2.00 to Building Fund.....	10,000.00
\$5.00 to Public Education Reserve.....	25,000.00
Balance to General Fund: @ \$28.50.....	142,500.00
Interest & Miscellaneous Income.....	3,000.00
<b>TOTAL FUNDS AVAILABLE</b> .....	<b>\$145,500.00</b>
<b>EXPENSES: (Administrative &amp; General)</b>	
Printing, Mailing & Postage.....	\$ 6,500.00
Office Supplies .....	3,000.00
Insurance & Bonds.....	5,986.00
Auditing .....	750.00
Salaries: Adm. & Office.....	35,000.00
General Counsel Retainer & Exp.....	8,900.00
Equipment & Repairs.....	1,500.00
Telephone & Telegraph.....	3,000.00
Taxes (Other than property).....	2,000.00
Misc. Expense & Contributions.....	1,400.00
Employee's Retirement Trust.....	10,331.37
<b>Total Administrative &amp; General Expenses</b> .....	<b>\$ 78,367.37</b>

## EXPENSES: (Society Activities)

Council Expense .....	\$ 15,000.00
AMA Delegates & Alternates.....	7,000.00
General Society Travel & Entertainment.....	7,200.00
Officers Travel .....	4,200.00
Secretary's Letters & Office Expenses.....	900.00
Woman's Auxiliary .....	600.00
Dues Collection Expense.....	2,750.00
<b>Total Society Activities Expenses</b> .....	<b>\$ 37,650.00</b>
<b>EXPENSES: (Committees)</b>	
Cancer Coordinating Committee.....	\$ 1,000.00
Child Welfare .....	400.00
Civil Defense .....	600.00
Geriatrics .....	800.00
Industrial Health .....	200.00
Legislative .....	3,000.00
Maternal Health .....	400.00
Mental Health .....	400.00
Michigan Health Council.....	10,000.00
Postgraduate Medical Education.....	4,000.00
Preventive Medicine .....	100.00
Permanent Conference .....	200.00
Rural Medical Service .....	200.00
Scientific Radio .....	1,400.00
Tuberculosis Control .....	200.00
Veneral Disease .....	200.00
Beaumont Memorial Restoration .....	900.00
Highway Accident Committee.....	300.00
Sundry Committee Expense.....	1,800.00
Bi-Annual Report (Rheumatic Fever).....	1,000.00
<b>Total Committee Expense</b> .....	<b>\$ 27,100.00</b>
<b>TOTAL GENERAL FUND EXPENSES</b> .....	<b>\$143,117.37</b>

MARCH, 1956

# ANNUAL SESSION OF THE COUNCIL

GAIN OR LOSS FOR THE YEAR (GAIN).....	2,382.63
BALANCE FOR PRIOR YEARS.....	77,597.98

NET GAIN OR LOSS FROM ANNUAL SESSION, M.C.I. and JOURNAL.....	79,980.61
BALANCE TO 1957.....	—0—
BALANCE TO 1957.....	\$ 79,980.61

## BUILDING MAINTENANCE FUND

<b>INCOME:</b>	
Allocation from membership dues.....	\$ 10,000.00

<b>EXPENSES:</b>	
Maintenance: Utilities, decorating, supplies, yard work, etc. ....	3,000.00
Salaries: Janitor .....	3,000.00
Property Taxes .....	900.00
Insurance: Fire & Liability.....	350.00
Depreciation .....	1,750.00
Furnishings .....	500.00
Miscellaneous .....	—0—

Total Building Maintenance Expenses.....	9,500.00
GAIN OR LOSS FOR THE YEAR (GAIN).....	500.00
BALANCE FROM PRIOR YEARS.....	13,788.46
BALANCE TO 1957.....	\$ 14,288.46

## CONTINGENT FUND (Surplus)

<b>INCOME:</b>	
Allocation from membership dues.....	\$ 15,000.00
BALANCE FROM PRIOR YEARS.....	37,267.34

TOTAL .....	\$ 52,267.34
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## ANNUAL SESSION

<b>INCOME:</b>	
Booth Sales: 99 spaces.....	\$ 22,600.00

<b>EXPENSES:</b>	
Scientific Meeting Expense.....	4,600.00
Exhibit Expense .....	2,600.00
Registration & Hotel Expense.....	1,000.00
State Society & Officers Night.....	3,950.00
Promotion: Printing, Mailing, Postage & Scientific Work Committee.....	2,850.00
Press Expense .....	1,200.00
Salaries .....	5,000.00
House of Delegates Expense.....	1,000.00
Miscellaneous Expenses .....	400.00

Total Annual Session Expense.....	\$ 22,600.00
GAIN OR LOSS ON ANNUAL SESSION.....	—0—

## MICHIGAN CLINICAL INSTITUTE

<b>INCOME:</b>	
Booth sales: 71 spaces.....	\$ 12,200.00

<b>EXPENSES:</b>	
Scientific Meeting .....	2,500.00
Exhibit Expense .....	3,000.00
Registration & Hotel.....	900.00
Promotion: Printing, Mailing, Postage and Committee Meetings .....	2,800.00
Press Expense .....	1,200.00
Salaries .....	1,400.00
Residents & Interns Conference.....	100.00
Miscellaneous Expenses .....	300.00

Total Michigan Clinical Institute Expenses.....	\$ 12,200.00
GAIN OR LOSS ON M.C.I.....	—0—

## PUBLIC EDUCATION ACCOUNT

<b>INCOME:</b>	
Allocation from membership dues.....	\$ 31,250.00
Other Income .....	—0—

Total Income .....	\$ 31,250.00
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<b>EXPENSES:</b>	
Committee Meetings .....	500.00
Equipment & Repairs .....	500.00
Printing, Mailing & Postage.....	2,500.00
Office Supplies .....	1,000.00
Salaries .....	16,700.00
Telephone & Telegraph.....	1,500.00
Travel & Entertainment.....	5,000.00
Exhibit Expenses .....	1,000.00
Publications, pamphlets, clippings.....	2,720.00
Radio, TV and Cinema.....	6,000.00
Miscellaneous Expense .....	200.00

Total Expenses .....	\$ 37,620.00
GAIN OR LOSS FOR THE YEAR (LOSS).....	—6,370.00
BALANCE FROM PRIOR YEARS.....	76,128.89

Total to 1957.....	\$ 69,758.89
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## THE JOURNAL

<b>INCOME:</b>	
Allocation from membership dues.....	\$ 7,500.00
Subscriptions—non-members .....	700.00
Advertising Sales .....	72,000.00
Reprint & Cut Sales.....	3,200.00
Miscellaneous Income .....	500.00
Total Income .....	\$ 83,900.00

<b>EXPENSES:</b>	
Editor's Expense .....	3,000.00
Printing, Mailing & Postage.....	49,000.00
Reprint & Cut Expense.....	3,000.00
Salaries .....	12,700.00
Discount & Commissions .....	16,000.00
Miscellaneous Expenses .....	200.00

Total Expenses .....	\$ 83,900.00
GAIN OR LOSS ON THE JOURNAL.....	—0—

## PUBLIC SERVICE ACCOUNT

<b>INCOME:</b>	
Allocation from membership dues.....	\$17,500.00

<b>EXPENSES:</b>	
Salaries .....	16,500.00
Telephone & Telegraph .....	1,000.00
Travel & Entertainment.....	5,000.00
Rural Health Conference.....	250.00
Miscellaneous Expenses .....	—0—
Committee Meetings .....	100.00

Total Expenses .....	\$ 22,850.00
GAIN OR LOSS FOR THE YEAR (LOSS) .....	—5,350.00
BALANCE FROM PRIOR YEARS.....	314.78
BALANCE TO 1957 (Loss) .....	—5,035.22

## PROFESSIONAL RELATIONS

<b>INCOME:</b>	
Allocation from membership dues.....	\$ 26,250.00

<b>EXPENSES:</b>	
Rent to Wayne County Medical Society.....	500.00
Salaries .....	16,500.00
Telephone & Telegraph .....	1,200.00
Travel and Entertainment.....	5,000.00
National Meeting Expense.....	2,500.00
County Secretaries-PR Conference.....	3,500.00
County Societies & Field Secretaries meetings.....	1,400.00
Woman's Auxiliary .....	1,000.00
Miscellaneous Expenses .....	100.00
Committee Meetings .....	500.00
Printing, Mailing & Postage.....	750.00

Total Expenses .....	\$ 32,950.00
GAIN OR LOSS FOR THE YEAR (LOSS).....	—6,700.00
BALANCE FROM PRIOR YEARS.....	7,136.93
BALANCE TO 1957.....	\$ 436.93

## RHEUMATIC FEVER CONTROL PROGRAM

<b>INCOME:</b>	
From Michigan Heart Association.....	\$ 7,345.76

<b>EXPENSES (Central Office)</b>	
Committee Meetings .....	500.00
Equipment & Repairs.....	450.00
Payroll Taxes .....	300.00
Printing, Mailing & Postage.....	1,500.00
Office Supplies .....	200.00
Publications & Pamphlets.....	100.00
Salaries: Administrative & Office.....	11,600.00
Travel .....	1,500.00
Fellowships .....	3,000.00
Telephone & Telegraph.....	100.00
Laboratory Aid Plan.....	1,000.00
Miscellaneous Expenses .....	—0—

Total Central Office Expenses.....	\$ 20,250.00
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<b>EXPENSES: (Control Centers)</b>	
Alpena .....	300.00
Ann Arbor .....	300.00
Bay City .....	1,000.00
Benton Harbor .....	200.00
Detroit .....	1,000.00
Grand Rapids & Muskegon.....	4,000.00
Jackson .....	100.00
Kalamazoo .....	1,000.00
Lansing .....	100.00
Petoskey .....	100.00
Pontiac & Royal Oak.....	200.00
Saginaw .....	200.00
Sault Ste. Marie.....	100.00
Traverse City .....	1,200.00

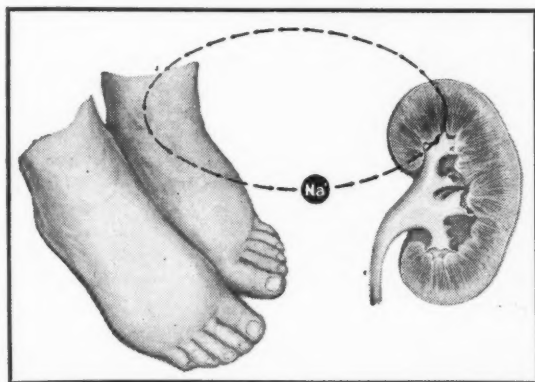
Total Control Center Expense.....	9,800.00
Total Rheumatic Fever Expenses.....	30,050.00
GAIN OR LOSS FOR THE YEAR (LOSS).....	—22,704.24
BALANCE FROM PRIOR YEARS.....	22,704.24

BALANCE TO 1957.....	—0—
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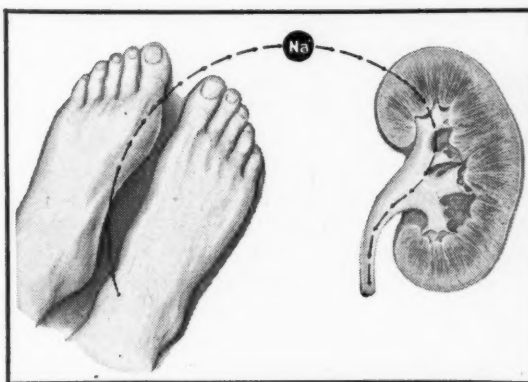
JMSMS

# New Orally Effective Diuretic for Congestive Edema

Best results are obtained when Mictine is administered with meals  
on an interrupted dosage schedule.



WITHOUT MICTINE — Prior to diuretic therapy excessive sodium and water are characteristically retained in the edematous patient.



WITH MICTINE — Inhibition of the reabsorption of sodium ion leads to an increased excretion of sodium ion, water and chloride.

An effective diuretic has been described as one which causes excretion of water, sodium and chloride in amounts sufficient to reduce the edema but not to result in salt depletion.

Mictine (brand of aminometradine) introduces to clinical practice an *improved* diuretic which not only meets the standard qualifications but has these seven additional advantages:

Mictine is orally effective; it is not a mercurial; it has no known contra-indications; it does not upset the acid-base balance; it exerts no significant influence on electrolyte balance; it may be given in the presence of renal or hepatic diseases; it is well tolerated.

As with most effective therapeutic agents, in high dosage Mictine may cause some side effects in some patients; however, on three tablets daily side effects (anorexia and nausea, rarely vomiting,

\*Trademark of G. D. Searle & Co.

diarrhea or headache) are minimal or absent.

Clinically, Mictine is useful in the maintenance of an edema-free state in all patients and for initial and continuing diuresis in mild or moderate congestive failure. It is not intended for initial diuresis in severe congestive failure unless either sensitivity or tolerance to other diuretics has developed in the patient.

The maintenance dosage of Mictine, as well as for initial diuresis in mild or moderate congestive heart failure, is one to four 200-mg. tablets daily in divided doses; the dosage for initial diuresis in severe congestive failure, under the conditions already described, is four to six tablets daily. For either use, it is recommended that Mictine be prescribed with meals on interrupted dosage schedules; that is, prescribing Mictine on alternate days or for three consecutive days and omitting it the next four days.

Descriptive literature and clinical trial packages are available on request to . . .

**SEARLE**

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Chicago 80, Illinois

# Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

## MICHIGAN'S POLIO VACCINE—SUMMED UP

As of January 31, Michigan has had 727,356 doses of poliomyelitis vaccine available for distribution. All of this vaccine was distributed to the local health jurisdictions based on the percentage of children 1 through 14 in each of the jurisdictions in relation to the total number of 1 through 14 children in the entire state.

Under the preceding National Foundation for Infantile Paralysis program, Michigan received 615,765 doses of the vaccine which were given to first and second grade children.

The total number of eligibles in Michigan in the 1 through 14 age group plus pregnant women amounts to 2,000,000 persons. Since optimum protection requires three doses per person, it is obvious that we have had available just slightly over 20 per cent of the 6,000,000 doses needed.

## LEGIBILITY REQUIRED BY LAW

The Michigan Department of Health would like to draw to the attention of all persons involved in the preparation of birth certificates, death certificates and burial permits that it is a statutory requirement that all information contained on these forms be either type-written or legibly printed, with, of course, the exception of signatures. With reference to signature, the statute requires that the signer of any of these documents shall have typed or legibly printed under such signature, the name signed above.

## FOR PARENTS OF PRESCHOOL DEAF AND HARD-OF-HEARING CHILDREN

The department is again co-operating with the Michigan School for the Deaf in its annual Parent Institute-Nursery School for preschool deaf and hard-of-hearing children and their parents to be held at the School in Flint, March 18-23. The institute is free to both parents and children who are residents of Michigan. Information may be obtained from the Michigan School for the Deaf, Flint 2, or from the Michigan Department of Health.

## "BABY IDENTIFICATION IN HOSPITALS"

A new pamphlet issued by the department, "Baby Identification in Hospitals," pictures the step-by-step procedure in one Michigan hospital of palmprinting newborn babies and fingerprinting their mothers. The Identification Bureau of the Michigan State Police considers palmprints of babies and fingerprints of their mothers the most reliable means of identification. The palmprint reveals more line pattern changes than does the footprint and these changes are the distinguishing characteristics of the print. The pamphlet is available from the department upon request.

## NEW VD FILM, "THE INVADER," AVAILABLE

The new motion picture, "The Invader," which deals with the historical background of the diagnosis and treatment of syphilis, is obtainable through local health departments and from the film loan library of the Michigan Department of Health. Information on the film may be secured from either source.

## WORKSHOP FOR TEACHERS OF EXPECTANT PARENT CLASSES

The Michigan Department of Health and the Clara Elizabeth Fund are sponsoring an annual workshop for teachers of expectant parent classes at Haven Hill on April 9, 10 and 11. The purpose of the workshop is to offer assistance to a selected number of nurses in the organization and teaching of classes for expectant parents.

## "WHAT TO EAT BEFORE AND AFTER THE BABY COMES"

The department's folder, "What to Eat Before and After the Baby Comes," has been revised and is again available to physicians wishing to use it with prenatal cases.

## EXTERNSHIP TRAINING PROGRAM TO CONTINUE

The externship training program for sophomore and junior medical students, begun by the department in 1952, will be continued this summer. Provision has been made for the employment of externs, probably six, for ten weeks of work experience in local health departments during the summer vacation.

The extern program has had two major objectives. One is to provide selected students with an opportunity to observe and participate in an official public health program, giving them firsthand knowledge of the role of the health department in safeguarding community health and possibly interesting them in public health as a career. The second objective is to provide added personnel for carrying on special projects or providing added emphasis to certain programs.

The classic triad of symptoms of renal neoplasms is hematuria, pain and mass.

\* \* \*

The classic histologic analysis of biopsy material still remains the most reliable diagnostic test.

\* \* \*

There are no qualitative or quantitative tests, either chemical, enzymatic or serologic, by which neoplastic growth can be diagnosed in the blood or in other body fluids.

\* \* \*

Suppression of lactation is an important factor in breast cancer.



Typical Sanka Booth At Medical Conventions All Over The Country

## You said, "THIS IS REAL COFFEE!" and your patients will agree!

"Real coffee—delicious coffee!" Such was your enthusiastic comment at medical conventions—when you tasted Instant Sanka at the Instant Sanka booth.

And, Doctor, you couldn't be more right. Since only the caffeine has been removed from

Instant Sanka Coffee, all the pure coffee goodness is there for you to enjoy.

Why not share the good news with your patients? If they're sensitive to caffeine—if they're sensitive to good coffee flavor—then Instant Sanka Coffee is for them!

### INSTANT SANKA COFFEE



All pure coffee...  
97% caffeine-free

Product of General Foods

MARCH, 1956

Say you saw it in the *Journal of the Michigan State Medical Society*

339



## NEWS MEDICAL

### MICHIGAN AUTHORS

George L. Waldbott, M.D., Detroit, is the author of an article entitled "Chronic Fluorine Intoxication from Drinking Water," published in the *International Archives of Allergy and Applied Immunology*, Vol. 7, No. 2, 1956. He was the author of an article on the same subject published in Italian in *Folio Clinica Internazionale*, April, 1955.

W. W. Ackermann and H. Kurtz, Ann Arbor, are the authors of an article entitled "Observations Concerning a Persisting Infection of Hela Cells with Polio-myelitis Virus," published in the *Journal of Experimental Medicine*, November 1, 1955.

George L. Waldbott, M.D., Detroit, is the author of an article entitled "Ocular Allergy from the Allergist's Point of View," published by invitation, in the *Transactions of the American Academy of Ophthalmology and Otolaryngology*, July-August, 1955.

G. C. Brown, Ann Arbor, is the author of an article entitled "Effect of Booster Inoculations on the Serologic Status of Children Vaccinated with Polio-myelitis Vaccine," published in the *American Journal of Public Health*, November, 1955.

Harry C. Saltzstein, M.D., Detroit, is the author of an article entitled "The Follow-up Examination for Cancer—With Comments on Diagnosis," published in *Harper Hospital Bulletin*, November-December, 1955.

Harold Henderson, M.D., and Harold Mack, M.D., Detroit, are the authors of an article entitled "Program Highlights—1955 Meeting, American Association of Obstetricians and Gynecologists," published in *Harper Hospital Bulletin*, November-December, 1955.

Joseph C. Erwin, M.D., Detroit, is the author of an article entitled "Bone Marrow Aspiration—A Note to House Officers," published in *Harper Hospital Bulletin*, November-December, 1955.

Irving B. Shulak, M.D., and Abraham Becker, M.D., Detroit, are the authors of an article entitled "Psychosis Following Acute Myocardial Infarction—Case Report," published in *Harper Hospital Bulletin*, November-December, 1955.

Roderick P. MacDonald, M.D., Detroit, is the author of an article entitled "Chemical Laboratory and Physician—Partners in Medical Progress," published in *Harper Hospital Bulletin*, November-December, 1955.

Vance Fentress, M.D., and David J. Sandweiss, M.D., Detroit, are the authors of an article entitled "Tubeless Gastric Analysis—Preliminary Report," published in *Harper Hospital Bulletin*, November-December, 1955.

J. S. DeTar, M.D., Milan, is the author of an article entitled "What Kind of Doctor Do You Need?" pub-

lished in Parade section of the *Detroit Free Press*, February 5, 1956.

M. K. Newman, M.D., Detroit, is the author of an article entitled "Ultrasonics in Neurofibromatosis," published in *Transactions of the American Institute of Ultrasonics and Medicine*, January, 1956. Associated authors were A. S. Goldstein, M.D., Marjorie Hoff, R.P.T., and Robert Simms, R.P.T.

J. M. Hammer, M.D., and P. H. Seay, Ph.D., Kalamazoo, and E. J. Hill, M.D., F. W. Prust, M.D., and R. B. Campbell, Detroit, are the authors of an article entitled "Surgery Illustrated. Intestinal Segments as Internal Pedicle Grafts," published in *A.M.A. Archives of Surgery*, October, 1955.

Thomas Francis, Jr., M.D., Ann Arbor, is the author of an article entitled "Virus Problems in Medicine," presented as the Oration in Medicine at the annual meeting of the Illinois State Medical Society, Chicago, May 18, 1955, and published in the *Illinois Medical Journal*, November, 1955.

J. S. DeTar, M.D., Milan, is the author of an article entitled "The Problems and Future of General Practice," published in *GP*, January, 1956. A similar version of this article is being published simultaneously in *The Modern Hospital*.

L. J. Hirschman, M.D., Traverse City, Norman D. Nigro, M.D., Detroit, and Ralph M. Burke, M.D., Detroit, are authors of an original article "The Scope of Office Proctology" which appeared in the *Surgical Clinics of North America*, October, 1955.

H. M. Nelson, M.D., Detroit, is author of an original article, "Progress is Being Made in Cancer Control," which was published in the *Philippine Medical World*, October, 1955.

\* \* \*

The Defense Department gave final approval, Friday, January 6, to a directive establishing captaincy in the Army or Air Force, and lieutenantcy in the Navy as starting grades in the medical and dental corps.

\* \* \*

Jack S. Guyton, M.D., Detroit, and John E. Magielski, M.D., Ann Arbor, are to be on the faculty of the Twenty-ninth Annual Spring Congress of the Gill Memorial Eye, Ear and Throat Congress which is to be held April 2 to 7, 1956, in Roanoke, Virginia.

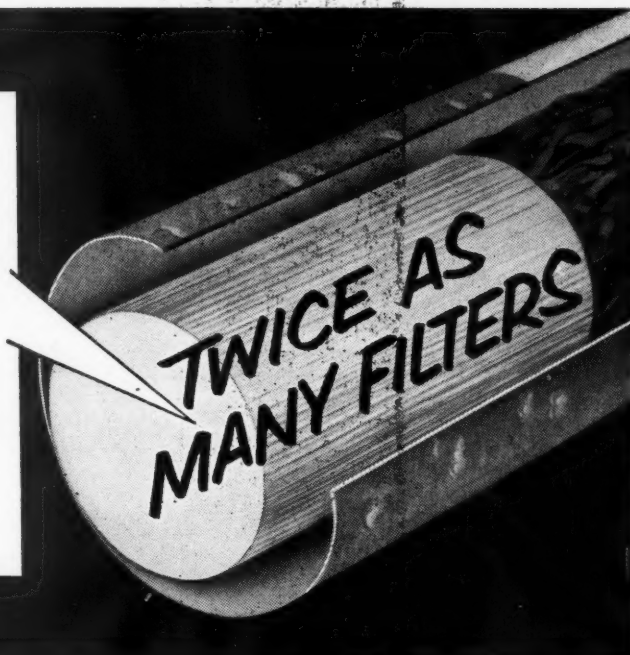
\* \* \*

Parent Institute Nursery School.—In order to accelerate the early educational and social development of deaf and hard-of-hearing children through the instruction of their parents, the Michigan School for the

(Continued on Page 342)

# What makes Viceroy different from other filter cigarettes?

Only VICEROY—  
has 20,000 tiny filters  
in every tip... twice as  
many as the other two  
largest-selling filter  
brands! That's why you  
get that fresh, clean  
real tobacco taste!



The VICEROY filter tip contains 20,000 tiny filters made exclusively from pure cellulose . . . soft, snow-white, natural. This is twice as many filters as the other two largest-selling filter brands.

That is why VICEROY gives you such a fresh, clean taste—that real tobacco taste you miss in other filter brands. No wonder so many doctors now smoke and recommend King-Size VICEROYS.

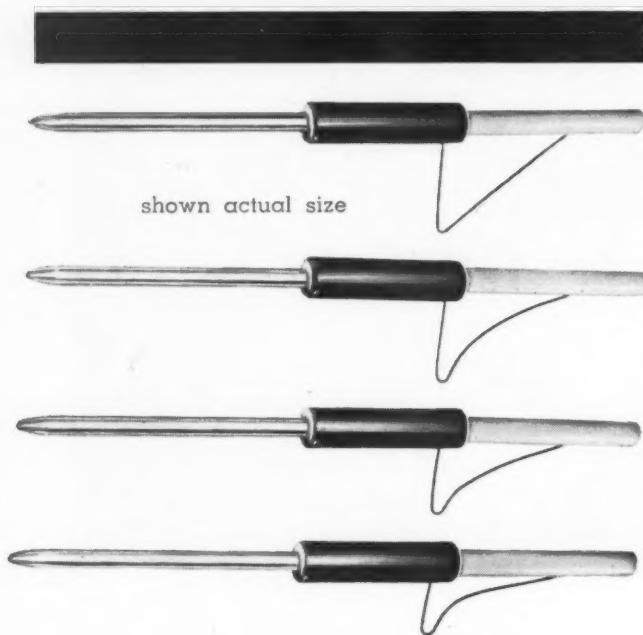
*If it's Viceroy you can tell  
the difference blindfolded!*

*King-Size  
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designed to meet the  
**HAWKINS\* technic**

Built by Birtcher of the finest materials to exactly meet the requirements of the technic of M. C. Hawkins, Jr., M.D., of Searcy, Arkansas, described in his paper "Re-Evaluation of Conization of the Cervix," published in *Southern Medical Journal*.

\*Described in his paper which will be sent on request

**NOBLE-BLACKMER, INC.**

267 W. Michigan

28148

Jackson, Michigan

(Continued from Page 340)

Deaf in Flint is holding its Sixteenth Annual Session March 18 to March 23, 1956. Among the speakers for the lecture series are Mr. Bruce R. Siders, superintendent of the Michigan School for the Deaf; Dr. Kendall Hooper, Flint otologist; Miss Margaret H. Fitzgerald, principal of the St. Mel-Holy Ghost Day School for the Deaf in Chicago; Dr. Ralph Rabinovitch, chief of the Children's Service, University Hospital Neuropsychiatric Institute, Ann Arbor; and Miss Mary Blair, consultant in the education of physically handicapped, Michigan Department of Public Instruction. The featured speaker for the banquet, March 23, is Dr. Clarence O'Connor, superintendent of the Lexington School for the Deaf, New York.

\* \* \*

The Staff of Mt. Carmel Mercy Hospital, Detroit, presented their Seventeenth Annual Clinic Day on Wednesday, January 25, 1956. L. W. Gardner, M.D., and W. A. Chipman, M.D., were co-chairmen.

\* \* \*

The Twenty-Ninth Annual Congress in Ophthalmology, Otology, Rhinology, Laryngoscopy, Faciomaxillary Surgery, Bronchoscopy and Esophagoscopy, will be held at Gill Memorial Hospital in Roanoke, Virginia, April 2 to 7, 1956. Two Michigan men will be guest speakers—Jack S. Guyton, M.D., of Detroit, and John E. Magielski, M.D., of Ann Arbor. Other Michigan men who have been guest lecturers of former courses are: Ferris Smith, M.D., Grand Rapids; A. C. Furstenberg, M.D., Ann Arbor; Claire L. Straith, M.D., Detroit; J. H. Maxwell, M.D., Ann Arbor; A. D. Ruedemann, M.D., Detroit; Bruce Fralick, M.D., Ann Arbor; Harold F. Falls, M.D., Ann Arbor; Russell N. DeLong, M.D., Ann Arbor; Jerry W. Conn, M.D., Ann Arbor; H. Saul Sugar, M.D., Detroit; Richard Schneider, M.D., Ann Arbor; John Sheldon, M.D., Ann Arbor.

\* \* \*

The Ninth Annual Rural Health Conference was held in Kalamazoo on January 19 and 20, 1956. The General Conference Chairman was Milon Grinnell, East Lansing, Editor of *Michigan Farmer*. The Local Chairman was E. Gifford Upjohn, M.D., Kalamazoo, President of the Upjohn Co.

\* \* \*

Diagrams and photographs of experimental surgery by J. M. Hammer, M.D. and P. H. Seay, Ph.D., of Kalamazoo and E. J. Hill, M.D., and R. B. Campbell, M.D., of Detroit, and F. W. Prust, M.D. (USN) are reproduced in beautiful color plates in the magazine *Scope*, published quarterly by The Upjohn Company, Kalamazoo. The plates are from articles published in *AMA Archives of Surgery*, 67:23, 1953; 69:198, 1954; 71:625, 1955, and from the *Journal of the International College of Surgeons*, 23:500, 1955.

\* \* \*

Mark F. Osterlin, M.D., medical director of the Central Michigan Children's Clinic at Munson Hos-

(Continued on Page 344)

# Bovie?...

sure, our  
hospital uses  
Bovies —

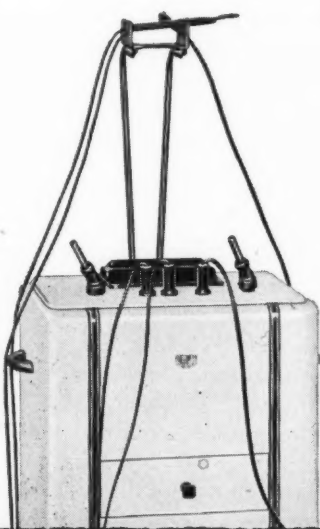
- but what has that  
to do with me?



That's a question we like to answer, Doctor! No one knows better than you that America's family doctors are finding more and more people dependent on them for a greater-than-ever degree of personally-administered medical care. That's where the OFFICE BOVIE comes into the picture . . . because it provides dependable office electrosurgery to *extend* and *augment* your medical practice.

The "little" Bovie is proving a *big* help to doctors interested in doing *more* for their patients. Have *you* considered the OFFICE BOVIE for use in your office? Thousands of doctors *are* using it daily for a host of useful minor surgical techniques. *We'd like to send you, without obligation, an interesting 6-page illustrated brochure on this important subject . . .*

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—made by Liebel-Flarsheim, makers  
of the famous Hospital type Bovie  
Electrosurgical Units.

THE LIEBEL-FLARSHEIM CO.  
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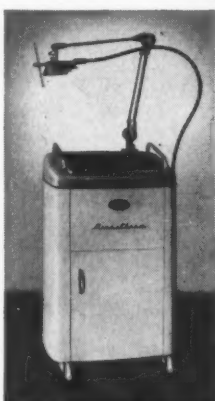
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for  
dependable  
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Simple "floating-arm" positioning, continuous power control, automatic timer and director flexibility give efficient control for deep tissue heating.

This precise focusing brings a rise in temperature up to 106° F. two inches deep in muscle tissue to increase blood flow and relieve painful inflammatory lesions.

Write for complete descriptive literature.



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(Continued from Page 342)

pital in Traverse City, has received the Traverse City Chamber of Commerce annual award as the Outstanding Citizen of 1955. Dr. Osterlin's selection was based on long but little recognized service to Traverse City and surrounding areas over a period of 20 years. Dr. Osterlin has been one of the motivating figures in the growth and development of Munson Hospital. He is an outstanding pediatrician and a member of the faculty of the medical school of the University of Michigan. In addition, he was one of the early promoters of the National Music Camp, has played an important part in the founding and development of Northwestern Michigan College, the Traverse City Symphony and other cultural projects.

\* \* \*

Wayne University College of Medicine held its Fifth Annual Symposium on Blood on January 21, 1956. The committee consisted of Walter H. Seegers, M.D., E. A. Sharp, M.D., and Calvin H. Hughes.

\* \* \*

A summer camp for diabetic children will be opened for the eighth season under the auspices of the Chicago Diabetes Association from July 15, 1956, to August 5, 1956, at Holiday Home, Lake Geneva, Wisconsin. The Diabetes Association furnishes a staff of resident physicians and dietitians trained in the care of diabetic children. Boys and girls ages eight to fourteen years are eligible. For details write The Chicago Diabetes Association, 3 South Wabash, Chicago 3.

\* \* \*

The 1956 Industrial Health Conference will be held April 21-27, in Convention Hall, Philadelphia, Pennsylvania. From April 22-24 will be held the American Conference of Governmental Industrial Hygienists; on April 24-26, the American Association of Industrial Nurses; on April 24-26, Industrial Medical Association; April 24-26, American Association of Industrial Dentists; April 23-27, American Industrial Hygiene Association.

\* \* \*

A regional meeting of the Southern Region of the American College of Gastroenterology will be held in New Orleans, La., on Sunday, April 8, 1956. The Scientific Sessions will be held in the auditorium of the Louisiana State University School of Medicine, commencing at 2:00 p.m.

Members of the medical profession are cordially invited to attend. A copy of the program may be obtained from the Secretary, American College of Gastroenterology, 33 West 60th Street, New York 23, N. Y.

\* \* \*

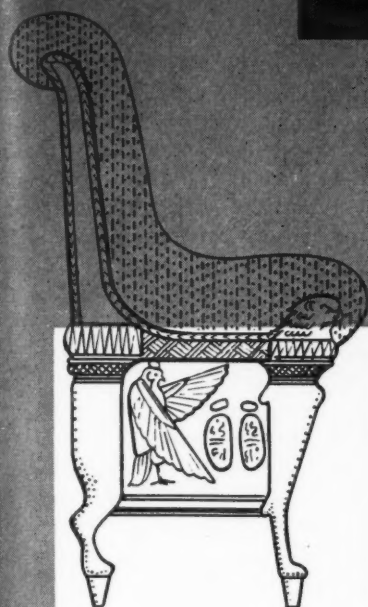
M. K. Newman, M.D., addressed the staff of the Detroit League for the Handicapped, January 7, 1956, on the subject, "Muscular Dystrophy." "Electromyography in Physical Medicine and Traumatic Diseases" was the title of his address given before the Detroit Academy for the Surgery of Trauma, on January 17, 1956.

\* \* \*

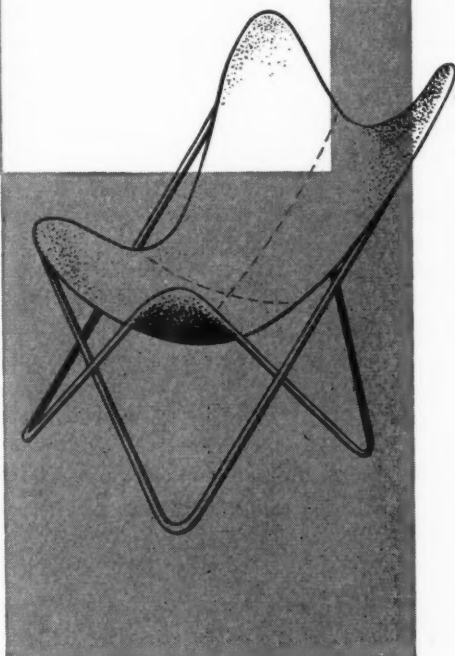
The Ninth Annual Rural Health Conference made

(Continued on Page 346)

FOR HYPERTENSION



"AN ALLIANCE  
OF THE CLASSIC  
AND CONTEMPORARY"



## *Synergistic Therapy with New* **THEOMINAL® R.S.**

Now you can give your hypertension patients  
the compound therapeutic advantages  
of two successful hypotensive agents:  
Theominal (theobromine with Luminal®)  
and purified Rauwolfia serpentina alkaloids.

**THEOMINAL R. S. gives**  
*Better Control of Cardiovascular  
and Subjective Symptoms*

Theominal R. S. offers both the vasodilator and  
myocardial stimulant actions of theobromine with  
Luminal and the moderate central hypotensive effect of  
Rauwolfia serpentina. Gentle sedation calms the patient  
and a feeling of "relaxed well-being" is established.  
With Theominal R. S. the therapeutic potency of each  
of the components is enhanced and the chance of a  
patient's sensitivity to any one drug is lessened.

**Each Theominal R. S. tablet contains:**

Theobromine .....	0.32 Gm. (5 grains)
Luminal .....	10 mg. (1/8 grain)
Purified extract of Rauwolfia serpentina alkaloids .....	1.5 mg.

**DOSE:** 1 tablet two or three times daily.

**SUPPLIED:** bottles of 100 and 500 tablets.

**Winthrop**  
LABORATORIES

NEW YORK 18, N. Y. WINDSOR, ONT.

THEOMINAL AND LUMINAL (BRAND OF PHENOBARBITAL), TRADEMARKS REG. U. S. PAT. OFF.

MARCH, 1956

*Say you saw it in the Journal of the Michigan State Medical Society*

345

**WE CORDIALLY INVITE YOUR INQUIRY** for application for membership which affords protection against loss of income from accident and sickness (accidental death, too) as well as benefits for hospital expenses for you and all your eligible dependents.



**SINCE  
1902**

**ALL  
PREMIUMS  
COME FROM**

**PHYSICIANS  
SURGEONS  
DENTISTS**

**ALL  
BENEFITS  
GO TO**

**\$4,500,000 ASSETS  
\$22,500,000 PAID FOR BENEFITS**

**PHYSICIANS CASUALTY  
AND  
HEALTH ASSOCIATIONS  
OMAHA 2, NEBRASKA**

(Continued from Page 344)

feasible by the financial assistance of the Michigan Foundation for Medical and Health Education, and sponsored by the Michigan Health Council, was held in Kalamazoo, January 19 and 20, 1956, at the Harris Hotel. Milton Grinnell of Lansing, editor of the *Michigan Farmer*, presided. The first forenoon was devoted to three speeches: Albert E. Heustis, M.D., "A Look into the Future—in Public Health"; L. Fernald Foster, M.D., Secretary of MSMS—"In Medical Care"; Lt. Governor Phillip A. Hart—"In Sociological Areas of Health." Chairman Otto Yntema, Western Michigan College, previewed the Deskside Conference, which ensued after lunch. Resource persons were: Heart Disease—John D. Littig, M.D., Kalamazoo; Cancer—R. C. Hildreth, M.D., Kalamazoo; Mental Health—C. M. Schrier, M.D., Kalamazoo State Hospital; New Drugs—Henry M. Swain, M.D., Department of Pharmacy, University of Michigan; Poliomyelitis—Thomas Francis, Jr., M.D., Ann Arbor, School of Public Health. The conferences continued, with a coffee break, until 4:00 p.m.

At the banquet in the evening, mimeographed copies of the morning speeches and the questions and answers of the Deskside Conferences were ready for anyone to take home. Awards were made and guests were introduced. At a central table were presidents of twenty-two of the sponsoring organizations constituting Michigan Health Council. The speaker of the evening was Austin Smith, M.D., Chicago, Editor of *The Journal of the American Medical Association*. He gave a very illuminating talk on "Your Future is Healthier."

Friday, January 20, was devoted to a second annual Community Health forum. S. E. Chapin, M.D., of Dearborn, talked on "Health Councils are Our Business." Otto Yntema, Kalamazoo, conference chairman, instituted the first "What's Your Opinion?" Everyone was invited to enter the discussion with questions and opinions. The second conference consisted of answers by the Resource people: O. Herbert Ellis, Detroit Tuberculosis and Health Society of Wayne County; S. E. Chapin, M.D., President, Health Council; Marjorie Karker, Lansing, Co-ordinator Women's Activities, Michigan Farm Bureau; Booker L. Masters, M.D., Freemont, MSMS Committee on Rural Health, and Warren F. Tryloff, Detroit, Field Secretary, MSMS.

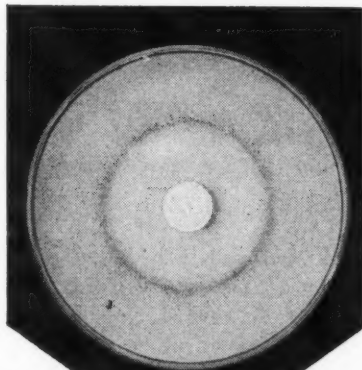
\* \* \*

The 150th Anniversary of the founding of the Medical Society of the County of New York will be celebrated in sesquicentennial events scheduled in April, 1956, according to Gerald D. Dorman, M.D., President of the Society.

New York County, the Island of Manhattan, has the largest local medical society in the nation with 7,000 members. The Society was founded in 1806 when 102 physicians assembled on the steps of City Hall and publicly proclaimed the Society of Physicians to exist. Its charter was then received from the State of New York. One of the forthcoming events of the sesqui-

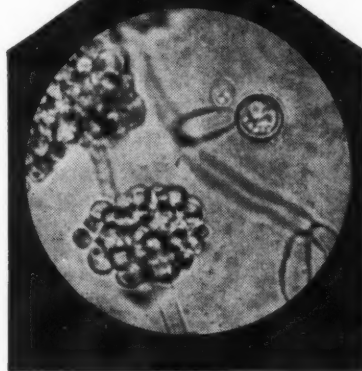
(Continued on Page 348)

*the only broad spectrum  
antibiotic preparation that...*



**1 provides the antimicrobial  
activity of tetracycline**

Because it contains Steclin (Squibb Tetracycline), the well tolerated broad spectrum antibiotic, MYSTECLIN is an effective therapeutic agent for many common infections. Most pathogenic bacteria, as well as certain large viruses, certain Rickettsiae, and certain protozoans, are susceptible to Mysteclin.



**2 protects the patient against  
monillal superinfection**

Because it contains Mycostatin (Squibb Nystatin), the first safe antifungal antibiotic, MYSTECLIN acts to prevent monillal overgrowth frequently observed during broad spectrum antibiotic therapy. Manifestations of this overgrowth may include some of the diarrhea and anal pruritus associated with antibiotic therapy, as well as vaginal monilliasis and thrush. On occasion, serious and even fatal infections caused by monilia may occur.

# Mysteclin

STECLIN-MYCOSTATIN  
(Squibb Tetracycline-Nystatin)

Each MYSTECLIN Capsule contains 250 mg. Steclin (Squibb Tetracycline) Hydrochloride and 250,000 units Mycostatin (Squibb Nystatin).

Minimum adult dose: 1 capsule q.i.d.

Supply: Bottles of 12 and 100.

**SQUIBB**

"MYSTECLIN", "STECLIN" AND "MYCOSTATIN"® ARE SQUIBB TRADEMARKS

MARCH, 1956

*Say you saw it in the Journal of the Michigan State Medical Society*

347

for modern  
control of  
salt retention  
edema

**CUMERTILIN<sup>®</sup>**

(Brand of Mercumatin, Endo)

*Tablets*

- effective oral diuretic with no significant gastrointestinal irritation<sup>1</sup>
- Suitable for long-term maintenance therapy.
- eliminates need for injections in certain cases, lengthens interval between injections in others
- basically different in chemical structure, extending the therapeutic choice in organic mercurials

**DOSAGE:** 1 to 3 tablets daily as required.

**SUPPLIED:** As orange tablets, in bottles of 100 and 1000. Also available—

**CUMERTILIN** Sodium Injection, 1- and 2-cc. ampuls, in boxes of 12, 25, and 100; and 10-cc. vials, individually and in boxes of 10 and 100.

1. Pollock, B. E., and Pruitt, F. W.: *Am. J. M. Sc.*, 226:172, 1953.

**THE G. A. INGRAM COMPANY**  
4444 Woodward Avenue, Detroit 1, Mich.

(Continued from Page 346)

centennial will be to re-enact this scene and rededicate the Society to the service of the citizens of New York.

Plans for the celebration include historical exhibits, programs in the scores of hospitals of the city on the newest clinical applications of medicine, open house and special exhibits in the five medical schools of New York, television and radio programs for the public on "New Horizons in Medicine" and special cancellation postmarks for all letters mailed in Manhattan during the event. A special anniversary seal has been created for use on all letters mailed by physicians and as a motor vehicle sticker on the cars of physicians.

William B. Rawls, M.D., a past president of the Society, is general chairman of the anniversary event which will climax at a formal dinner for more than 1,000 persons at the Waldorf-Astoria Hotel on the evening of April 5, 1956.

\* \* \*

All Army physicians and dentists in the grade of first lieutenant who have at least one year of professional experience will be advanced to the temporary grade of captain within the next two months has been announced by Major General Silas B. Hays, The Army Surgeon General.

The advancements, which will affect an estimated 1,100 medical and 500 dental first lieutenants, are the result of a revised personnel policy which makes doctors and dentists eligible for the grade of captain after one year or more of professional experience.

The new policy will not impede the promotion of nonmedical officers, because the Department of Defense has authorized the advancements to be made outside of the Army's regular quota of captains.

Starting in April, young doctors and dentists entering the Army will receive initial grades of captain if they have a year or more of professional experience. Thus, with the exception of military interns—who serve as first lieutenants—the lowest grade in the Army Medical Corps will be that of Captain.

The new policy recognizes that doctors must have at least nine years of training beyond the high school level in contrast to the four years of formal education beyond high school required of most other officers at the time they are initially commissioned.

\* \* \*

The Trudeau School of Tuberculosis will present its forty-first Annual Session June 4-29, 1956. The course covers all aspects of pulmonary tuberculosis and phases of other chronic chest diseases.

Tuition fee is \$100 payable on or before June 4. A few scholarships are available for those who can qualify. Communications should be addressed to Secretary, Trudeau School, 7 Church Street, Saranac Lake, New York.

\* \* \*

L. Fernald Foster, M.D., Bay City, MSMS Secretary, spoke on "Facts on our 1956 Michigan Medical Service" at the February 17 meeting of the Muskegon County Medical Society.

(Continued on Page 350)

# Meat...

## *and the Value of Fat in Nutrition*

Authorities in the field of nutrition no longer consider fat as an optional component of the diet. Evidence from the laboratory and bedside indicates that fat in small amounts may be looked upon as an obligatory constituent of a health-promoting diet.<sup>1</sup>

The far-reaching value of fat in nutrition has been amply demonstrated in laboratory animals in its pronounced effect on growth, on pregnancy and lactation, on nitrogen-sparing action, on work capacity, on time of sexual maturity, on the period of survival during fasting, and on ability to combat external stresses.<sup>1</sup>

Young animals fed a fat-free diet not only fail to grow normally, but develop hair and skin changes characteristic of "essential" fatty acid deficiency.<sup>2</sup> Fatty acids other than the "essential" fatty acids also appear to be necessary for optimal health. Animals fed "essential" fatty acids but no others do not grow optimally.

The value of fat in human nutrition was emphasized in a recent study<sup>2</sup> comprising 200 patients incapable of receiving adequate nourishment. For periods of 1 to 30 days, these patients were given supplementary fat alimentation by vein in the form of fat emulsion containing "essential" as well as other fatty acids. The result was typically a marked increase in weight and more positive nitrogen and potassium balances.

Meat, recognized for its high content of biologically valuable protein, B vitamins, and essential minerals, provides, in addition, substantial amounts of nutritionally important fat.

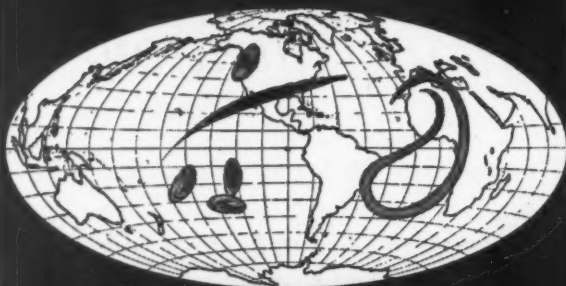
1. Deuel, H. J., Jr.: Newer Concepts of the Role of Fats and of the Essential Fatty Acids in the Diet, *Food Res.* 20:81 (Jan.-Feb.) 1955.

2. Meng, H. C.: Preparation, Utilization, and Importance of Neutral Fat Emulsion in Intravenous Alimentation, in Najjar, V. A.: *Fat Metabolism*, Baltimore, The Johns Hopkins Press, 1954, pp. 69-92.

The nutritional statements in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.

**American Meat Institute**  
Main Office, Chicago . . . Members Throughout the United States

# 'ANTEPAR'®\*



for "This Wormy World"

## PINWORMS

## ROUNDWORMS

\* **SYRUP OF 'ANTEPAR'** Citrate brand  
Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

\* **TABLETS OF 'ANTEPAR'** Citrate brand  
Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.



BURROUGHS WELLCOME & CO. (U. S. A.) INC.  
Tuckahoe, New York

### NEWS MEDICAL

(Continued from Page 348)

Thomas Francis, Jr., M.D., Ann Arbor, evaluator of the Salk polio vaccine, recently stated that the fight against polio may lead to pills. A chemical approach to the problem would attack the poliomyelitis virus directly, whereas the Salk vaccine relies on antibodies built up in the blood as protection against the disease, Dr. Francis said.

\* \* \*



Fred Drolett, M.D., Lansing, was honored by members of the Ingham County Medical Society on January 21, 1956. President John M. Wellman, M.D., Lansing, presented Dr. Drolett with the ICMS Annual Service Citation and called Doctor Drolett "a sound general practitioner who continues to be not indifferent, not careless, not absorbed in other pursuits; a man whose life is devoted to the care of sick people." Doctor Drolett has been practicing medicine for forty-nine years. Two sons, Lawrence and Donald, also practice medicine in Lansing.

Congratulations, Doctor Drolett!

\* \* \*

W. B. Cooksey, M.D., Detroit, was recently appointed a member of the Detroit Board of Education.

Congratulations, Doctor Cooksey!

\* \* \*

Edmond L. Cooper, M.D., Detroit, recently was elected Secretary-Treasurer of the American Orthoptic Council. Another Michigan ophthalmologist serving on the Council is John W. Henderson, M.D., Ann Arbor.

Doctor Cooper is the author of a recent article entitled "Muscle Surgery and Orthoptics" which was published in the *American Journal of Ophthalmology*.

\* \* \*

E. F. Sladek, M.D., Traverse City, presented a talk on "Anal Fissure and Associated Pathologic Conditions in Infancy and Early Childhood" at the June, 1955, meeting of the American Proctologic Society in New York City. His paper was printed in the *American Journal of Surgery*, Volume 90.

\* \* \*

The 1956 Industrial Health Conference is scheduled for Convention Hall, Philadelphia, April 21-27, 1956. O. T. Mallery, Jr., M.D., Director, University of Michigan Institute of Industrial Health, Ann Arbor, is scheduled to be on the program April 26.

For information and copy of the program, write Industrial Health Conference, 28 E. Jackson Blvd., Chicago.

\* \* \*

A Conference on Anesthesiology is scheduled for April 26-27-28, to be held under the auspices of Wayne University College of Medicine and the Detroit Receiving Hospital.

Registration must be made in advance—the fee is \$4.00. For information write F. E. Greifenstein, M.D., Wayne University Board of Education, 1401 Rivard St., Detroit 7.

## NEWS MEDICAL

### WAYNE UNIVERSITY COLLEGE OF MEDICINE ALUMNI ASSOCIATION

Clinic Days and Alumni Reunion

Tuesday, May 8, 1956

Auditorium—Medical School

Registration—8:00 A.M.

Morning Session—9:00 to 10:05 A.M.

DEAN GORDON SCOTT

Introductory Remarks

GORDON B. MYERS, M.D.

"Treatment of Refractory Cardiac Failure"

CHARLES G. JOHNSTON, M.D.

"The Problem of Intestinal Obstruction"

Ward Rounds—10:15 A.M. to 12:00 M.

Receiving Hospital

MEDICINE—Groups of six each

SURGERY—Groups of six each

GYNECOLOGY—Groups of six each

PEDIATRICS—One group of six

Lunch—12:15 P.M.

Medical School

Afternoon Clinics—1:30 to 3:30 P.M.

Kresge Auditorium

MEDICINE—MUIR CLAPPER, M.D., Moderator

R. B. LEACH, M.D.

"The Clinical Use of Present-day Insulins"

YOSHIKAZU MORITA, M.D.

Ganglionic Blockers in the Treatment of Hypertension"

GEORGE O. CLIFFORD, M.D.

"Treatment of Anemia"

ALFRED J. BOLLET, M.D.

"Value of Hormone Therapy in the Rheumatic Diseases"

Afternoon Clinics—1:30 to 3:30 P.M.

Farwell Annex, 242

SURGERY—DUNCAN CAMERON, M.D., Moderator

PAUL K. TRUBA, M.D.

"Management of Colles Fractures"

A. JACKSON DAY, M.D.

"The Spiral Oblique Fracture of the Tibia"

HERBERT E. PEDERSEN, M.D.

"Pathological Fractures"

DON W. McLEAN, M.D.

"Diverticulitis of the Colon"

GAYLORD S. BATES, M.D.

"Carcinoma of the Colon"

ROBERT T. CROWLEY, M.D.

"Neoplasms of the Chest"

PAUL O'Rourke, M.D.

"Injuries to the Chest"

WARREN O. NICKEL, M.D.

"Fluid Balance Management in Burns"

GEORGE L. WALKER, M.D.

"Local Treatment of Burns"

Afternoon Clinics—1:30 to 3:30 P.M.

Neuropsychiatric Institute

GYNECOLOGY—C. S. STEVENSON, M.D., Moderator

H. L. FACHNIE, M.D.

"Prevention of Pre-eclampsia"

C. S. STEVENSON, M.D.

"Detection and Treatment of Cervical and Uterine Carcinoma"

RALPH F. SORTOR, M.D.

"Obstetrical Analgesia and Anesthesia"

C. E. DARLING, M.D.

"Management of Leukorrhea and Vulvar Pruritus"

Afternoon Clinic—3:40 to 4:45 p.m.

Farwell Annex, 242

O. A. BRINES, M.D., Moderator

MUIR CLAPPER, M.D., ALFRED M. LARGE, M.D.,

C. S. STEVENSON, M.D., ROBERT M. WHITROCK, M.D.

"Acute Conditions of the Abdomen"

MARCH, 1956

## Results With

# 'ANTEPAR'<sup>®</sup>\*

## against PINWORMS

In clinical trials, over 80% of cases have been cleared of the infection by one course of treatment with 'Antepar.'

Bumbalo, T. S., Gustina, F. J.,  
and Oleksiak, R. E.:  
J. Pediat. 44:386, 1954.

White, R. H. R., and  
Standen, O. D.:  
Brit. M. J. 2:755, 1953.

## against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides..."

Brown, H. W.:  
J. Pediat. 45:419, 1954.

\*SYRUP OF 'ANTEPAR' Citrate brand  
Piperazine Citrate

Bottles of 4 fluid ounces, 1 pint and 1 gallon.

\*TABLETS OF 'ANTEPAR' Citrate brand  
Piperazine Citrate

250 mg. or 500 mg., Scored

Bottles of 100.

Pads of directions sheets for patients available on request.



BURROUGHS WELLCOME & CO. (U.S.A.) INC.  
Tuckahoe, New York

## NEWS MEDICAL

Wednesday, May 9, 1956

### Hotel Fort Shelby

Registration—8:30 a.m., Main Floor Lobby

Morning Session—9:00 to 11:30 a.m.

Annual Alumni Business Meeting, Ballroom  
A. CARLTON ERNSTENE, M.D., Cleveland, Ohio  
"The Treatment of Coronary Heart Disease"  
E. PERRY McCULLAGH, M.D., Cleveland, Ohio  
"The Choice of Treatment of Hypothyroidism"  
J. S. GOTTLIEB, M.D., Detroit, Michigan  
"Modern Methods in Psychiatric Therapy"

Subscription Luncheon—12:30 p.m.

Afternoon Session—2:00 to 4:00 p.m.

DONALD C. COLLINS, M.D., Hollywood, California  
"Technique of Preparing Medical Articles for Publication"  
CHEVALIER L. JACKSON, M.D., Philadelphia, Pennsylvania  
"Diagnosis and Treatment of Carcinoma of the Larynx, Bronchi and Esophagus"  
ORVAR SWENSON, M.D., Boston, Massachusetts  
"Problems in Pediatric Surgery"

Reception—6:15 p.m.

Hotel Fort Shelby

Annual Alumni Reunion Banquet—7:00 p.m.

Hotel Fort Shelby

The American Association of Blood Banks will hold its 9th Annual Meeting on September 3-4-5, 1956, Somerset Hotel, Boston (not in Cincinnati in November as previously announced). For information, write Miss Marjorie Saunders, Secretary, 725 Doctors Building, 3707 Gaston Avenue, Dallas, Texas.

\* \* \*

James Milton Robb, M.D., Detroit, will be the Moderator of a Symposium on Otolaryngologic Therapy at the American Medical Association convention in Chicago, June 12-14.

\* \* \*

Harold F. Schuknecht, M.D., Detroit, will discuss the subject of "Carcinoma of the Nose and Paranasal Sinuses" at this AMA Session.

Bernard Weston, M.D., Detroit, also will present a paper entitled "Introduction of a New Instrument for Removing a Post Nasal Pack" at this convention.

Another Michigan speaker at this meeting is Bruce Proctor, M.D., Detroit, who will discuss the subject of "Traumatic Deafness."

\* \* \*

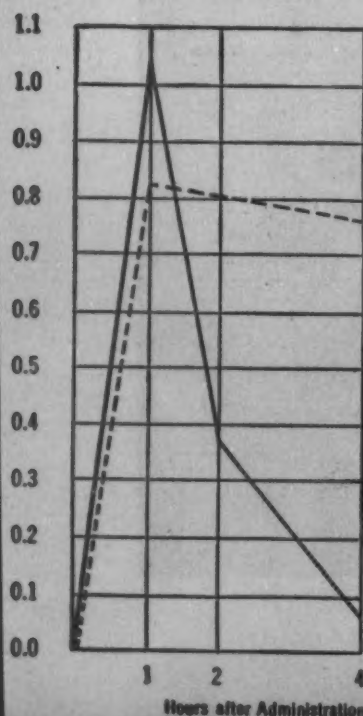
The Children's Bureau announced a special grant of \$55,000 to help the Michigan Crippled Children Commission treat child amputees from other states.

"Michigan is believed to have more experience in treating children with congenital or accidental amputation than any other state," the Bureau announcement stated.

The MCCC is authorized to offer to treat children

(Continued on Page 354)

Now! Palatable Oral Suspension Gives  
Higher, Faster Blood Levels than Twice  
the Dose of Injected Procaine Penicillin



— PEN-VEE Suspension,  
300,000 units  
- - - Procaine Penicillin G,  
600,000 units (one injection)

This ready-mixed, stable, and pleasant flavored suspension is supplied as follows: PEN-VEE Suspension, 300,000 units per 5-cc. teaspoonful, bottles of 2 fl. oz. Also available: PEN-VEE Oral Tablets, 200,000 units, scored, bottles of 36; 500,000 units, scored, bottles of 12.

# PEN-VEE\* Suspension

Benzathine Penicillin V Oral Suspension

ORAL PENICILLIN

WITH

INJECTION PERFORMANCE

Wyeth

Philadelphia 1, Pa.

## For TRIPLE SULFA

THERAPY  
in ALL AGE  
GROUPS



# BUFFONAMIDE

TRIPLE SULFA SUSPENSION

## TASTY, CHERRY FLAVOR and COLOR—ECONOMICAL!

There is no safer or more effective sulfonamide available! Extensive clinical trials show that triple sulfas (BUFFONAMIDE) have outstanding therapeutic efficiency among sulfa drugs.

### Each Teaspoonful (5 cc.) Provides:

Sulfadiazine	0.166 gm.
Sulfamerazine	0.166 gm.
Sulfacetamide	0.166 gm.
BUFFERED with Sodium Citrate	0.5 gm.

At Pharmacies Everywhere!  
Handy 2 oz. Dispenser Pints or Gallons

### BUFFONAMIDE ASSURES:

- Widest possible antibacterial spectrum
- Highest blood level... Safely and quickly
- Maximum potency in smallest dose
- Minimal side effects



**S. J. Tutag and Company**

19180 Mt. Elliott Avenue • Detroit 34, Michigan

## IF YOUR PATIENT WANTS TO DRINK THAT'S HIS BUSINESS IF HE WANTS TO QUIT that's our BUSINESS

BRIGHTON HOSPITAL, now in operation for over 2 years, wishes to thank the physicians of Michigan and Ontario for the good reception and the confidence given to us.

We know that today's physician recognizes the many-sided nature of the disease—Alcoholism. Beyond the physical, which requires expert treatment in itself, the alcoholic's physician is plagued, we know, with the equally vital aspects, which make demands on his time and attention, of the emotional, spiritual and mental sickness he notes in his patient.

We believe that Brighton Hospital offers the answer. Physicians can now send their alcoholic patients to Brighton with the certain assurance that they will find expert medical

and nursing attention AND that, if they so desire, patients will be thoroughly indoctrinated with the program of Alcoholics Anonymous.

BRIGHTON HOSPITAL is NOT interested in the patient who merely wishes to be dried out in order to resume drinking. We ARE interested in those patients who really, fervently, seek complete rehabilitation and a way of life FREED from alcohol.

BRIGHTON HOSPITAL is owned and operated by MICHIGAN ALCOHOLIC REHABILITATION FOUNDATION, a non-profit organization devoted to the best possible hospitalization of the alcoholic who seeks to stop drinking.

DOCTORS, we are here to serve you. We are here to serve your patients.

## BRIGHTON HOSPITAL

12851 East Grand River Avenue

Brighton, Michigan

Phone: Brighton Academy 7-1211

(Continued from Page 352)

from any part of the country where adequate state or local treatment is not available. The fund will pay expenses, if other means are not available.

Under the project, any physician or clinic may recommend to his own state's crippled children's agency that a child patient be treated in Michigan if the state of origin does not have adequate or suitable treatment available. If the state agency determines the child is eligible for treatment under the state program, the application would be sent to Michigan for decision.

The \$55,000 grant is for the period ending July 1.

\* \* \*

The Children's Psychiatric Unit of the University of Michigan was dedicated on February 1, 1956. Congratulations, University of Michigan, on this fine addition to a great medical school!

## GYNECOLOGIC CYTOLOGY SERVICE

Interpretation of Cervico-Vaginal, Etc.  
(Papanicolaou) Smears  
for the

Diagnosis of Carcinoma

Kits (Slides, Spatulas, Fixative and  
Mailing Containers)

and

Instructions for Taking and Mailing  
Smears furnished on request

M. WM. RUBENSTEIN, M.D.

GYNE-CYTOLOGY LABORATORY

104 S. MICHIGAN AVE.

CHICAGO 3, ILL.

## MEDICAL TELEVISION SHOWS

Produced by Michigan Health Council

Date	Station	Subject	Guests
1956			
Jan. 1	WJBK-TV, Detroit	Drop in the Bucket	A Film
Jan. 5	WKAR-TV, East Lansing	9th Annual Michigan Rural Health Conference	Milon Grinnell, East Lansing
Jan. 8	WJBK-TV, Detroit	9th Annual Michigan Rural Health Conference	Sidney E. Chapin, M.D., Dearborn
Jan. 15	WJBK-TV, Detroit	The Medical Examiner System	Edward S. Zawadzki, M.D., Detroit
Jan. 22	WJBK-TV, Detroit	16th Annual Congress on Industrial Health	A. J. Vorwald, M.D., Detroit
Jan. 26	WKAR-TV, East Lansing	Mothers' March on Polio	E. A. Irvin, M.D., Detroit
Jan. 29	WJBK-TV, Detroit	Inside Story	Mrs. Mona Cutler, Lansing
			A Film

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**Northern Tri-State Medical Association**  
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**Annual Educational Assembly Program**

A.M.

- 8:00 REGISTRATION. (EASTERN STANDARD TIME)  
8:55 INTRODUCTORY REMARKS. DR. C. HOWARD ROSS, PRESIDENT  
9:00 WELCOME. DR. L. DELL HENRY, PRESIDENT, WASHTENAW COUNTY MEDICAL SOCIETY

PANEL DISCUSSIONS. (FIRST LISTED SERVES AS MODERATOR)

"MEDICAL EDUCATION OF TOMORROW."

Dr. Harlan Hatcher, President, University of Michigan.  
Dr. Clarence Hilberry, President, Wayne University.  
Dr. A. C. Furstenberg, Dean, University of Michigan Medical School.  
Dr. Gordon Scott, Dean, Wayne University Medical School.

- 9:50 "COMMON GYNECOLOGICAL ERRORS."

Dr. H. H. Cummings, Gynecologist, St. Joseph Hospital, Ann Arbor.  
Dr. Norman Miller, Chief, Obstetrics and Gynecology, University Hospital.  
Dr. Norman Banghart, Department of Obstetrics and Gynecology, St. Joseph Hospital.  
Dr. Ward Seeley, Professor, Obstetrics and Gynecology, Wayne University.  
Dr. Richard Stander, Instructor, Obstetrics and Gynecology, University Hospital.

- 10:30 CYRUS C. STURGIS PANEL - "THE GERIATRIC LUNG."

Dr. Winthrop N. Davey, Director, Tuberculosis Unit, University Hospital.  
Dr. Herbert Sloan, Associate Professor, Thoracic Surgery, University Hospital.  
Dr. D. W. Martin, Physician, Beyer Memorial Hospital, Ypsilanti.  
Dr. Carl Frye, Physician, St. Joseph Hospital.

- 11:10 "THE DOCTOR AS A WITNESS."

Mr. Jack Pickering, Medical Reporter, *Detroit Times*.  
Dr. S. W. Donaldson, Director of Radiology, St. Joseph Hospital.  
Dr. Bernhard Steinberg, Director, Institute, Medical Research, Toledo, Ohio.  
Dr. Oliver W. Lohr, Director, Central Laboratory, Saginaw, Michigan.  
Mr. Clayton C. Purdy, Attorney, Detroit, Michigan, Essayist.

- 11:50 "THE HYPOTENSIVES—THEIR STRENGTH AND PITFALLS IN THERAPY."

Dr. Sibley Hoobler, Director, Hypertension Unit, University Hospital.

P.M.

- 12:10 LUNCHEON. Michigan League Ballroom. Wives cordially invited.

A. Short business meeting.

B. STYLE SHOW. Under the auspices of the Collins Shoppe and Washtenaw County Medical Auxiliary, with kind acknowledgments to Mrs. Henry R. Scovill and Mrs. Charles Newton.

C.

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- 1:50 Intermission before Afternoon Session.

- 2:00 "THE SALK VACCINE AFTER ONE YEAR."

Dr. Thomas Francis, Jr., Professor and Chairman, Department of Epidemiology, School of Public Health.  
Dr. F. M. Hemphill, Associate Professor, Public Health Statistics, School of Public Health.  
Dr. John Porterfield, Director, State Department of Mental Health and Correction, Columbus, Ohio.  
Dr. Otto K. Engelke, Washtenaw County Health Director.

(Continued on next page)

2:40 FREDERICK A. COLLER PANEL: "ACUTE CONDITIONS OF THE ABDOMEN."

Dr. Robert Berry, Professor of Surgery, University Hospital.  
Dr. Thurston Thieme, Surgeon, St. Joseph Hospital.  
Dr. Clarence Crook, Surgeon, St. Joseph Hospital.  
Dr. Lyndon Lee, Jr., Director of Surgery, Wayne County General Hospital.

3:20 JAMES L. WILSON PANEL: "PEDIATRIC NEUROLOGY."

Dr. Russell DeJong, Chief, Neurology, University Hospital.  
Dr. William Noshay, Chief, Neurology, Henry Ford Hospital.  
Dr. Harry Towsley, Professor of Pediatrics, University Hospital.  
Dr. Aaron Edwards, Pediatrician, St. Joseph Hospital.

4:00 MARK MARSHALL PANEL: "THYROID GLAND, NORMAL FUNCTION AND PATHOLOGY."

Dr. Darrell Campbell, Surgeon, St. Joseph Hospital.  
Dr. S. E. Gould, Pathologist-in-Chief, Wayne County General Hospital.  
Dr. B. C. Payne, Internist, St. Joseph Hospital.  
Dr. W. H. Beierwaltes, Internist-Isotopist, University Hospital.  
Dr. T. P. Eberhard, Radiologist-Isotopist, St. Joseph Hospital.

4:40 CONFERRING OF DISTINGUISHED MEDICAL CITIZENSHIP AWARD.

Dr. John M. Sheldon, Director, Department of Post-Graduate Medicine, University of Michigan, will present this award to Dr. Howard H. Cummings, Professor Emeritus, Post-Graduate Medical Education.

5:00 INTERMISSION.

5:45 COCKTAILS, Allene Hotel.

7:00 DINNER AND MEETING OF THE WASHTENAW COUNTY MEDICAL SOCIETY, CANCER PROGRAM. Allene Hotel.

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\*Krantz, J. C., Jr., and Carr, C. J.: The Pharmacologic Principles of Medical Practice, ed. 3, Baltimore, The Williams and Wilkins Company, 1954, p. 998.

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## Communications

Dear Doctor Haughey:

As you know, it is not practical to make an exact comparison between Social Security benefits and a comparable life insurance program, since no insurance contracts written is exactly parallel to Social Security benefits. A general comparison, however, is sufficient to establish a perspective and to make certain general observations.

First, take a self-employed business man, aged thirty, who has a wife the same age (to simplify our calculations) and twin boys, aged three (again for purposes of simplification). This man earns \$4,200.00 a year, the maximum amount under the Social Security percentage system in calculating his contribution.

If this man dies, Social Security will pay his widow and two sons \$200.00 a month for fifteen years, when the boys reach the age of eighteen. Then all income stops until the widow reaches age sixty-five, at which time she is eligible for an income of \$81.40 per month for the rest of her life. A lump sum benefit not to exceed \$255.00 would also be paid at the time of the man's death.

If the man lives, he is eligible at age sixty-five to receive \$162.80 per month as long as both he and his wife are alive. If she dies, his income will be reduced to \$108.50 per month for life. If he dies, his widow would receive \$81.40 for life.

The cost of this protection under the current law, which required 3 per cent of his \$4,200 on a graduated scale which eventually goes up to 6 per cent in 1975 and thereafter, will total by age sixty-five for this self-employed businessman—the sum of \$8,442.00.

This means that if both retire at sixty-five and receive \$162.80 per month retirement income, in less than five years the businessman has recovered his cost of protection.

Now, take the case of a physician, aged thirty, with a wife of the same age and twin boys aged three. We cannot construct an exact equivalent of the Social Security situation without making actuarial computations on a policy that no life insurance company has for sale. We can, however, approximate the situation.

This doctor buys a \$20,000.00 policy on the Life Paid Up at sixty-five plan, with a family income term rider that will pay \$200.00 a month, in the event of his death, for fifteen years, at which time his sons will be eighteen. This same policy will pay him \$158.44 a month for life at age sixty-five, and will continue these payments for ten years from date of retirement whether he lives or not.

This policy will cost the doctor a total of \$19,409.20 between the ages of thirty and sixty-five. The cash value and estimated dividends on one company would by that time approximate \$26,232.20. This means that he has had the protection of \$20,000, plus a family income of \$200 a month and at retirement may receive his cost back plus a profit of \$6,823.20. He may then turn around and convert this cash to a life income of \$158.44 per month as described above or withdraw the \$26,232.40 in cash.

If both the doctor and his wife are alive at sixty-five and elect to receive a retirement income of \$158.44 a month for his lifetime, it would take over nine years to recover the cost of the plan. On the other hand, in the case of Social Security, if both the businessman and his wife die at sixty-five, all the cost of the plan is lost. This would be true if they died before sixty-five as well. In the case of the doctor and his wife, the benefits would go to the final beneficiary.

One other thing. If the businessman under Social

(Continued on Page 360)

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## COMMUNICATIONS

(Continued from Page 358)

Security does not retire at sixty-five, he will not receive the retirement benefits. On the other hand, the physician will receive the retirement benefits of the insurance plan, whether he retires or not.

I hope this has been some help in drawing some general conclusions regarding the Social Security question in its purely mathematical aspects.

Sincerely,  
FRANK B. EGAN  
Licensed Insurance Counselor

January 31, 1956

Dear Wilfrid:

As nine out of ten (or more) Michigan physicians are apparently unaware that *annual* registration of all physicians in Michigan is a legal requirement of the present Medical Practice Act, I am suggesting that this provision be called to their attention through the columns of the JOURNAL.

Under this section (P.A. 338.60, Compiled Laws of 1948) the secretary of the Board of Registration must "annually, on or before the first day of January," be furnished with "the name, age and sex of each (physician), and the length of time each has been engaged in practice." The Act further provides that the above information must be collected by the "assessing officer at the time of making the annual assessment," turned over to the County Clerk, certified and transmitted by him to the secretary of the Board.

This method of collection and transmission of information was geared to conditions of the 19th century but by our modern standards it is both cumbersome and undependable.

The amendment to Section 10, Act 237 of 1899 which

I have prepared eliminates two steps (the Tax Assessor and the County Clerk) from the present three-step registration process. It provides for transmission of information by the individual physician direct to the Board secretary. I believe that no one, who will take the trouble to study the matter, can conceivably champion the old three-step registration process in preference to the new simplified method.

The proposed \$5.00 registration fee is nominal—the annual registration fee for optometrists is \$15.00. While I can see some merit to the provision of the Osteopathic and similar Acts which provide for annual refresher courses as a prerequisite to issuance of the annual registration certificate, I am not including such provision in this amendment.

You and I have seen a lot of changes in our lifetime and, I am sure, you will agree that a statute that originally went on the books in 1883, almost three-quarters of a century ago, is ripe for some modernization.

Best regards,  
FRED W. ZINN  
House of Representatives

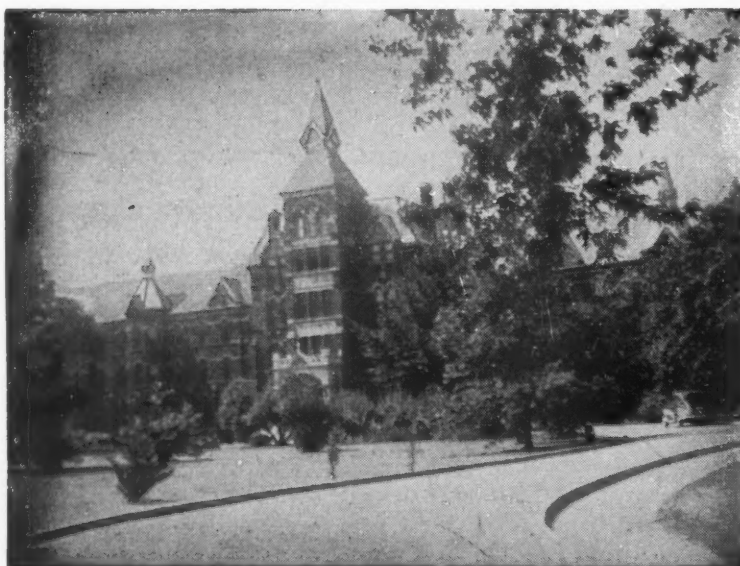
Lansing, Michigan  
January 25, 1956

### WHO OWNS AMERICA?

A tourist in Europe met a Britisher. The stranger remarked proudly, "I am a British subject. I suppose you are a subject of the United States?" "Subject? Not on your life. I own a part of the United States. I'm no subject."

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MARCH, 1956

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361

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Lawrence, W. E., Kahn, S. S., and Riser, A. B.:  
South. M. J. 47:105, 1954.

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## THE DOCTOR'S LIBRARY

*Acknowledgment of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.*

**SEXUAL HYGIENE AND PATHOLOGY.** A Manual for the Physician. By John F. Oliven, M.D., Psychiatrist to Vanderbilt Clinic, Columbia-Presbyterian Medical Center, New York; former senior Psychiatrist, Bellevue Hospital and Mental Hygiene Clinic; Instructor in Psychiatry, College of Physicians and Surgeons, Columbia University. Philadelphia and Montreal: J. B. Lippincott Company, 1955. Price, \$10.00.

**BEDSIDE DIAGNOSIS.** By Charles Seward, M.D., F.R.C.P. (Edin.), Physician, Royal Devon and Exeter Hospital; Consulting Physician, Princess Elizabeth Orthopaedic Hospital, West of England Eye Infirmary and the Ministry of Pensions; Honeyman Gillespie Lecturer; Late Advisor in Medicine to Eastern Command, India; Deputy President, Review Medical Board, India. With a foreword by Sir Henry Cohen, M.D., D.Sc., L.L.D., F.R.C.P., F.F.R. Professor of Medicine, University of Liverpool. Third Edition. Edinburgh and London: E. & S. Livingstone, Ltd., 1955. Price, \$4.00.

**DOCTOR AND PATIENT.** By Desmond O'Neill, M.D., M.R.C.P. (Lond.), D.P.M. (Eng.), Physician, Department of Psychiatry, St. Mary's Hospital, London; Psychiatrist, Chelsea Hospital for Women; Clinical Assistant, Department of Psychological Medicine, University College Hospital. Philadelphia and Montreal: J. B. Lippincott Company. Price, \$5.00.

**PROCEEDINGS.** Third Medical Conference of Muscular Dystrophy Associations of America, Inc., New York, N. Y., October 8 and 9, 1954.

**MODERN DRUG ENCYCLOPEDIA AND THERAPEUTIC INDEX.** Edited by Marion E. Howard, M.D., F.A.C.P. Associate Clinical Professor, Department of Internal Medicine, Yale University School of Medicine; Associate Physician, Grace-New Haven Community Hospital and the Department of University Health, Yale University, New Haven, Conn. Sixth edition. New York: Drug Publications, Inc. (49 West 45th Street), 1955.

**CORRELATIVE NEUROSURGERY.** By Edgar A. Kahn, Robert C. Bassett, Richard C. Schneider, Elizabeth Caroline Crosby. Contributors: Basu K. Bagchi, Jere M. Bauer, John M. Converse, William T. Correa, Russell N. DeJong, Robert G. Farris, David G. Freeman, John F. Holt, Tryphena Humphrey, Henry R. Pantek, Carl F. List. With a foreword by Kenneth G. McKenzie, M.B., Toronto, F.R.C.S.(C) Consulting Senior Surgeon to the Toronto General Hospital and recently in charge of the Division of Neurosurgery in the Toronto General Hospital. Springfield, Illinois: Charles C Thomas, 1955. Price, \$19.50.

The neurosurgeons who participated in the writing of this text were all trained by Dr. Max M. Peet who died suddenly on March 25, 1949. The teaching of Dr. Peet is evident as one reads the descriptions of surgical

(Continued on Page 364)

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Surgery of Colon and Rectum, one week, April 9, May 7

General Surgery, two weeks, April 23

Basic Principles in General Surgery, two weeks, April 9

Thoracic Surgery, one week, June 4

Esophageal Surgery, one week, June 11

Breast and Thyroid Surgery, one week, June 18

Gallbladder Surgery, ten hours, April 9, June 25

Fractures and Traumatic Surgery, two weeks, June 18

Varicose Veins, ten hours, April 30, June 18

**GYNCOLOGY**—Office and Operative Gynecology, two weeks, April 16, June 18

Vaginal Approach to Pelvic Surgery, one week, April 30, June 11

**OBSTETRICS**—General and Surgical Obstetrics, two weeks, May 7

**MEDICINE**—Internal Medicine, two weeks, May 7

Electrocardiography and Heart Disease, two-week basic course, March 12

Gastroenterology, two weeks, April 23

Dermatology, two weeks, May 7

**RADIOLOGY**—Diagnostic X-Ray, two weeks, April 30

Clinical Uses of Radioisotopes, two weeks, May 7

**PEDIATRICS**—Intensive Review Course, two weeks, May 14

Neurological Diseases: Cerebral Palsy, two weeks, June 18

**UROLOGY**—Two-week Course, April 16

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## THE DOCTOR'S LIBRARY

(Continued from Page 362)

procedures. Almost all phases of neurosurgery are covered, in children as well as adults. The source material comes from the practical experiences of the Neurosurgical Clinic of the University of Michigan Medical School.

Dr. Elizabeth Crosby and the neurosurgical staff, working together, have correlated neuroanatomy and neurosurgery. The neuroanatomical diagrams, drawn especially for this text, do not try to show too much. They are simple but illustrative and helpful to the reader.

There are nonsurgical chapters on x-ray, electroencephalography, aphasia, endocrinology and radioactive isotopes, all done by experts in their fields.

This text, so well conceived and written, will find a welcome niche in the library of not only the neurosurgeon but also the practitioner, the medical student and the surgical resident.

J.W.H.

**PRESENT-DAY PSYCHOLOGY.** An Original Survey of Departments, Branches, Methods, and Phases, including Clinical and Dynamic Psychology. Edited by A. A. Roback, with the collaboration of forty experts in the various fields. New York: Philosophical Library, 1955. Price, \$12.00.

The preparation of a comprehensive survey of psychology, or any similar subject, in a single volume undoubtedly presents many difficulties. With contributions from so many sources, each one an expert in his field,

there will be complications in style, some repetition and some lack of uniformity. In overcoming these initial problems, the editor has achieved a measure of success when the book goes to the publishers.

A review of the table of contents and of the titles of the forty papers included would reveal certain other problems. Of these, the most prominent is the apparent boundless extent of the subject. Not only is this a "psychology" of any subject involving human endeavor, but there is a "psychology" of borderlands as well. Without further comment, the editor's intent to include "everything which is under investigation and of psychological import" seems to have been fulfilled.

As one would expect, some of the individual contributions are excellent reviews of the subject chosen. Among the remainder, some have suffered from limitation of space, and others are much too wordy. On the whole, the papers are interesting and should provide the sort of symposium intended by the editor.

F.O.M.

## MICHIGAN FEDERATED UNION MEDICAL PLAN

(Continued from Page 319)

Compliance with the letter of the law might be difficult. This threat is indication, however, of coming events. If any of our members still believe "socialized medicine" is a dead issue—just look around this peninsula. The socializers, the dogooders are still in government—protected by Truman's inclusion into Civil Service. They are still making policy at high level.

The "high costs" now being used as stimulus to action by unnamed Union leaders were directly caused by labor wage increases. Shorter hours, more employees, and demands for more pay caused seven-eighths of the advance in the last five years. Who squawked? Had hospital costs gone up as much as labor costs, who knows where they would have ended? Hospital administrators are not yet paying nearly as much as has been granted to millions of workers recently.

The new Union Medical Plan!! Do you see a hidden step towards Ewing's national compulsory health plan? Labor constantly demands more complete coverage, home and office and hospital, and the best possible care—but reneges on paying its cost. All this is promised in their new plan. If they fail, they will demand that the government take over!

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